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PUBLIC HEALTH DEPARTMENT,
JOHNSTON TERRACE,
EDINBURGH, *June 1931.*

MY LORD PROVOST, LADIES AND GENTLEMEN,

I beg to submit the Annual Report on the health of the City for the year 1930.

The first noteworthy point to which I would draw attention is the retiral of Dr. William Robertson from the position of Medical Officer of Health owing to the age-limit imposed by the Superannuation Act. Dr. Robertson held the position for a period of about eight years, during which time many outstanding advances in Public Health took place. He retired in September, and the best wishes of all the members of the staff, and of all others who were in any way associated with him, follow him in his retirement.

The population of the City for the year 1930 as estimated by the Registrar-General Population. was 425,951, and it is on this figure that the rates relating to the vital statistics throughout this Report are calculated.

The preliminary figures in connection with the recent census which have just been published show that the population has been under-estimated by approximately 13,000. The discrepancies between the estimated and the actual population which are disclosed at each succeeding census would appear to emphasise the need for a quinquennial enumeration.

With the increasing attention that is now being paid to public health matters, it is desirable that the data presented through the medium of these Reports should be as accurate as possible. Another reason which might be urged for a modified census every five years is the fact that the population is a factor in determining the amount of government grants to municipalities.

One of the essentials for a healthy race is suitable housing, and this is equally essential Housing. for the contentment of the community. While the Council is making a most praiseworthy effort to improve the housing conditions, much yet remains to be done, and it is only those who are brought into direct contact with the needs of the populace who appreciate fully the extent of the requirements.

Very many distressing cases could be given illustrating the pressing need which still exists, and without being over-sentimental one or two might be given. A young married woman whose husband occupies a good position, pays 15s. per week for a furnished room. She expects to be confined shortly and has been informed that she must leave her room as the proprietrix insists that the confinement must not take place there. Prolonged anxious inquiries have failed so far to find a house.

Another family, consisting of parents and grown-up sons and daughters, living in a single room, are unable to get another house and they continue thus to live, exposed to the discomfort and the marked moral and physical dangers of the single room. Cases such as these might be quoted until the very number dulls the sense of injustice, but these only are given in order to emphasise, if possible, the knowledge that the housing shortage has not yet been met.

While good housing is necessary for a healthy race, equally, if not more so, is Housewifery. good housekeeping. It is often found in a congested, condemned area, that while many of the houses leave much to be desired from a hygienic point of view, some are models of cleanliness, ventilation, and intelligent housewifery. This is as it should be. As it is not the gun but the man behind the gun who matters, so it is not so much the house as the housewife.

It appears to me to be an essential part of every girl's education that she should know before marriage the economics, the practical running of a house, and the elements of the care and nurture of children. It is the women especially that we look to, and depend on, for the healthy upbringing of the next generation.

Causes of Death.

An interesting medico-sociological study is the various causes of death. Typhus and smallpox have caused none, and enteric fever only two deaths. Such a simple statement, which would have been impossible and probably not even imaginable to our fathers, conveys a world of information to the thinking mind.

Smallpox.

In the month of June a case of smallpox had been in residence in the city for one night during the infectious stage. The exposed family were quarantined and each member vaccinated, but no spread of the disease occurred.

It is a matter for thankfulness that for the past few years Edinburgh has escaped this disease, though it is fairly common on the other side of the Border. So long as we remain a well-vaccinated community, so long, I think, shall we be immune to smallpox.

Tuberculosis.

Tuberculosis slowly yields ground as it has been doing for the past two generations, due, I think, to the better conditions and improved hygiene of the population.

It will be seen by the report of the Tuberculosis Department that the death-rate is the lowest yet recorded, the actual rate being 0.78 per thousand. Some eighteen years ago when I entered the service, the rate was 1.26 per thousand, and, discussing the future progress of the disease with a brother official, we both expressed the conviction that before the Superannuation Act compelled retiral we should probably see the rate down to 0.5 per thousand. That expectation is in a fair way to become an actuality.

The new X-ray plant installed in the Royal Victoria Dispensary is a great boon, and the work in that Department is second to none. I have no doubt but that tuberculosis will one day become a rare occurrence, and that in spite of the fact that so far, even after the most prolonged and careful research, no specific cure has been found.

Cancer.

The number of deaths caused by cancer increases slowly; during the year 716 have been reported. The disease is, apparently, becoming more common in all civilised lands. Much research is being made as to its cause and cure, but it still remains one of the great enigmas of preventive medicine. It is of primary importance that the cause and prevention be discovered. The only redeeming feature in this depressing picture is that cancer attacks chiefly in the later stages of life. By far the majority of the cases occur after fifty years of age. On page 14 will be seen a Table showing that the death-rate from the disease has increased from 0.8 per thousand in 1898 to 1.7 in 1930.

Infectious Diseases.

The City has been comparatively free from serious epidemic diseases. There were 1,102 cases of diphtheria notified during the year, with 1,086 removed to hospital and 71 deaths. There has been for some reason an increase during the past five years in the notifications of diphtheria, and the increase has been especially marked during the past two years.

There were 1,278 cases of scarlet fever reported but only 8 deaths, the type of scarlet being very mild.

The outstanding feature of the infectious diseases was a widespread measles epidemic. Only the first case in a household is notified; yet we had 7,182 such cases intimated. As indicated on page 18, special steps were taken to deal with the epidemic but, in all, 106 children died of the disease, mainly owing to complications. It is worthy

of remark that only four deaths occurred in children over five years of age. This fact strongly impresses upon one the necessity of protecting the child under five years from measles; a statement equally applicable to all other infectious diseases.

I desire to draw attention to the invaluable piece of work being carried on in the University Bacteriological Laboratory, namely, a systematic investigation into the presence of tubercle bacilli in cows' milk. The work is only proceeding, but up to the present 12 per cent of the samples examined were found to contain tubercle bacilli. In view of this, the truth of the words of Professor Mackie are obvious, namely, "the importance of this systematic enquiry cannot be over-estimated." Money spent on the enquiry is well-spent: it is foolishness to be expending money curing children of tuberculosis and at the same time permitting others to be infected by drinking tuberculous milk.

Bacterio-
logical
Report.

The importance of the health of the milch cow is further emphasised in the bacteriological report by the study of the *Bacilli abortus* infection of man. This, I think, is the first occasion on which an allusion has been made to it in the Annual Report. There have been two cases in the City due to the infection of milk by the *Bacillus abortus*, the germ responsible for the disease known as Contagious Abortion in cattle. The disease is widespread in different parts of the country, and it is known that many of the animals which have suffered from it may transmit the organism in their milk. While cases of infection by this organism amongst the population are infinitesimal, it is still a disconcerting thought that one may occasionally be drinking milk containing this specific organism, so this disease in addition to tuberculosis makes the call for healthy cows all the more clamant. Pasteurisation, it should be noted, kills the *Bacillus abortus*.

Valuable work has also been done in the investigation of pneumonia, a disease which bulks largely in our death returns. During the year we have had 526 deaths from this condition, so that any contribution which can be made towards a specific cure is to be welcomed.

I cannot pass this section without making comment on the mutual beneficent relationship which exists between the University and this Department. The closer the co-operation the more effective will be the work accomplished, and I think it will be to the advantage of the University as the teaching and research body, and to the citizens of Edinburgh.

The work of the Child Welfare Department continued on lines similar to that of previous years. The infant mortality rate for the year was 82. No new developments have taken place. The more densely-populated Wards, Canongate, St. Andrews, St. Giles and St. Leonards, show the worst rates. The number of maternal deaths which occurred in the City during the past year was 59, an increase of 8 compared with the previous year. Of these deaths, 13 were due to puerperal sepsis and 19 to toxæmias, that is to say, these two causes alone accounted for 32 deaths, and the question that arises in one's mind is: had a careful ante-natal supervision been observed over these women, how many of them might have been alive to-day?

Child
Welfare
Department.

In connection with the deaths of children under four weeks, it is to be noted that some 125 of them died from premature birth, and 30 from debility. Here again, a saving of life might be effected through careful ante-natal supervision of the pregnant woman.

Twenty-three children died from injury at birth (11 boys and 12 girls). While this does not at first seem an alarming number, a comparison of the figures for the last few years gives rise to serious thought. In 1921, 3 such deaths were recorded, and the number has steadily risen till, in 1930, 23 deaths from this cause were registered. Of these deaths, 14 took place in hospitals. Running side by side with these figures is the fact that attendance at confinements by midwives has decreased from 803 in the year 1921 to 418 in 1930.

The work of the Venereal Diseases Department continues as in previous years. During the period under review, no fewer than 5,503 new patients were examined at the various Centres. These figures show a slight decrease from those of the previous year, being 410 fewer.

One would feel happy if it could be inferred that this decrease means a diminished incidence of the disease, but this does not necessarily follow. The work in the Department is at a high standard but, unfortunately, the conditions under which the staff work are far from ideal. Negotiations are proceeding at the moment to see whether the present arrangements can be improved, and I have no doubt they will be brought ultimately to a successful issue and the Department will be housed under conditions corresponding to the importance and efficiency of the work done.

As a disease, venereal conditions stand in a category by themselves. There are, no doubt, many innocent sufferers—most of these being women and children—but by far the majority of the patients suffer from the disease owing to their habits. We can look forward in the hope of seeing the end of certain diseases, for example, such conditions as tuberculosis and rickets. In the case of others there is very little hope, in the present state of medicine, that we will see an early termination, and venereal disease comes into that category. Indeed, it has been spoken of as “an endless chain.” The real prevention of venereal disease lies in the adoption and practice of a strict moral code of ethics. While, ideally, this teaching has everything to commend it, there are thousands of our population who are not prepared to conform to such teaching. Nothing will be achieved by dwelling on the obnoxious features of venereal diseases. Indeed, to the medical mind venereal diseases are not one whit more obnoxious than others. The prevention of the disease will rather lie in inculcating into the rising generation a higher moral standard and the fact that continence makes, in the end, a healthier race and a happier individual.

The first noteworthy point I mentioned was the retiral of Dr. Robertson. The second is the coming into operation of the Local Government (Scotland) Act of 1929, whereby all the medical services of the Schools and the Poor Law, including the Mental Institutions, were transferred to the Local Authority.

There was much disquiet in the minds of many as to the advantages or disadvantages of the proposed change, but I think that we, as a City, form a very good example of the wisdom of the new arrangement, and can show excellent results, in the unification of the various services.

The first Service that I desire to note is that of the School Medical Department. Here we have the supervision of 60,000 children, and I look upon the Medical Services in this Department as of prime importance. By the passing of the 1929 Act we get under one authority a continued supervision of the child from birth to the end of its school life.

Inspection of children as they enter school shows that the medical care of the pre-school child is not yet perfect, for I find that no less than 12 per cent. of the children arriving at school age are below the average nutrition. Markedly enlarged tonsils are present in 6 per cent. We have 364 children placed in schools for the mentally defective, and 446 in schools for the physically defective.

The medical inspection of school children is one of the most beneficent measures that we have had introduced into our social fabric for many years, and the full fruition of this work is not yet complete. Further improvements will be effected, and the ideal to be aimed at is that the child should arrive at young manhood physically perfect. The pre-school child presents many peculiar difficulties, because damage is often done in early years which, by a little knowledge, could be corrected. Much damage is done from the lack of knowledge on the part of the parent, and, occasionally, through indifference. The problem is most acute in those homes where the poverty of the parents renders the struggle of life hard and bitter, and this, too often, leads to indifference and a neglect of the laws of health and hygiene.

Improvement of the medical care of the pre-school child would be obtained by an extension of the National Health Insurance Act so as to include dependants. In this way each family would have a private medical adviser of its own, and the parents would be enabled to consult a medical practitioner freely without the question of finance entering into the consultation. Short of this ideal arrangement, there are certain steps that should be taken. There is the grouping of the children from selected areas into nursery schools and toddlers' playgrounds where medical inspection can be periodically carried out, although this can of necessity only reach a small number. Every encouragement should be given to necessitous parents to bring their toddlers to the Child Welfare clinics, and also for the parent to attend with the pre-school child at the medical inspection at the school clinics.

Under the section of Housing I spoke on the importance of the housewife in connection with health, and here I should like to reiterate and re-emphasise the importance of the mother. No schemes can ever achieve the results they ought, unless supported in every way by the parents, and more especially by the mother. There is no excuse whatever for any child suffering from serious disease in such a City as ours, where medical facilities exist to such a wonderful extent, and the child arriving at school years crippled or damaged by serious disease is a grave reflection on the capacity of the parents to deal efficiently with the upbringing of their children.

In regard to the treatment of the Sick Poor, the transfer from the Public Assistance Committee to that of the Public Health is not yet complete, nor can it be so until certain hospital rearrangements and alterations have been carried out. In the meantime, Craigleith Hospital has been handed over to the Public Health Committee, and steps are being taken at the moment with regard to the staffing of this and the other hospitals so as to secure the best medical and surgical treatment of the patients, and to see that the training of the nurses is brought to the highest possible point of efficiency. Technically we are still limited to the treatment of people in receipt of "Poor Law Relief," but steps, I have no doubt, will be taken at an early date to remove this barrier as far as Edinburgh is concerned, so that these hospitals will be opened to the citizens irrespective of class or distinction, and that the treatment administered there will equal that of the best of the voluntary hospitals. Indeed, it is hoped that we may be able to lessen to some considerable extent the waiting-lists of the voluntary hospitals.

With regard to the Mental Services, the work here falls into two parts, viz., the treatment of mental diseases and the care of the mental defective.

The mental diseases are treated at Bangour Hospital and the daily average number of patients in residence is approximately 1,030. The mentally defective are cared for at Gogarburn Certified Institution, which at present has accommodation for 150 patients. Additions are in course of construction which will increase the accommodation to 500 beds. School medical inspection is rapidly disclosing the extent of the problem in mental deficiency, and until Gogarburn is completed institutional treatment cannot be provided for all who require it.

The 1929 Act brought about a very distinct alteration in the relationship of the Medical Superintendents of these Institutions to the Local Authority but, so far, I am unaware that it has been to the detriment of the Institutions, and I feel that with mutual adaptation to the new circumstances no difficulties need arise but what can be amicably adjusted.

In conclusion I should like to express the opinion that the Public Health Service of the City is well staffed by competent men and women who, I feel sure, give of their best to the service of the citizens.

I am, My LORD PROVOST, LADIES and GENTLEMEN,

Your obedient Servant,

JOHN GUY, M.D., D.P.H. (Camb.), F.R.F.P. & S. (Glas.), F.R.C.P. (Edin.),
Medical Officer of Health.

SUMMARY OF STATISTICS

For the Years 1926, 1927, 1928, 1929 and 1930.

	1926	1927	1928	1929	1930
Population Estimated to middle of year	424,025	425,147	428,454	427,538	425,951
Area of City—Acres	32,526	32,526	32,526	32,526	32,526
Density of Population—Persons per acre	13·0	13·0	13·2	13·1	13·1
Houses Inhabited	103,222	104,488	106,325	107,704	108,375
Marriages Registered	3,823	3,861	3,760	3,955	3,693
Birth-rate	19·6	19·0	18·6	18·4	18·8
Do. (Corrected for Country Births)	18·7	17·9	17·3	17·1	17·2
Death-rate (Corrected for Country Deaths)	13·5	14·3	13·7	15·1	14·2
Infantile Mortality	80	80	75	80	82
Cancer Death-rate	1·5	1·7	1·6	1·8	1·7
Phthisis Death-rate	·8	·9	·8	·8	·8
* Epidemic Diseases Death-rate	·5	·5	·6	·4	·7

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhœa and Enteritis under 2 years.

Note.—Further detailed statistics for a series of years are shewn in the Tables throughout this Report.

VITAL STATISTICS

AND

REPORTS RELATING TO VARIOUS SUB-DEPARTMENTS AND INSTITUTIONS.

POPULATION.

The Registrar-General for Scotland estimates the population of the City for the year 1930 to have been 425,951. This is a decrease of 1,587 persons when compared with the estimate for the previous year.

The natural increase of population—*i.e.*, the excess of births over deaths—during the year was 1,269. The Registrar-General's estimate, however, is based on the actual number of occupied houses at Whitsunday with an adjustment for the movement of population through emigration and other causes.

The distribution of the population in the different districts of the City, including the residents in institutions and military quarters situated in the respective districts, was as follows :—

Area.	Males.	Females.	Total.	Acres.	Persons per Acre.
Edinburgh .	139,727	173,216	312,943	10,877	28·8
Leith .	38,778	40,851	79,629	1,641	48·5
Suburban .	16,229	17,150	33,379	20,008	1·7
	<u>194,734</u>	<u>231,217</u>	<u>425,951</u>	<u>32,526</u>	<u>13·1</u>

Ward Populations.—These populations are based on the average number of inhabitants per occupied house in each Ward, as revealed by the 1921 census

In the course of the last few years the distribution of the houses has been constantly changing, and it is possible that the number of inhabitants per house in the various wards, may not have remained stationary. In view of that the figures can only be accepted meanwhile as approximations.

Area.—The area of the City, the boundaries of which were last extended in 1920, is 32,526 acres, and the density of population remains the same as in 1929, *viz.*, 13·1 persons per acre.

The density of population in each of the Municipal Wards will be found on page 10. In regard to these rates, however, it has to be pointed out that they are based on the total area of the Ward, which includes a great amount of space monopolised for business and other purposes. The Canongate Ward for example includes, in addition to ground occupied by large industrial concerns, the whole of Holyrood Park, the boundaries of which are adjacent to St. Leonard's, Newington, and Portobello Wards.

HOUSING.

Inhabited Houses.—The accompanying Table, which has been kindly supplied by the Burgh Assessor, gives particulars regarding the number and rental of the occupied houses in each of the municipal Wards of the City :—

NUMBER OF DWELLING-HOUSES OCCUPIED AT WHITSUNDAY 1930.										
Ward.		Under £5.	£5 and under £10.	£10 and under £15.	£15 and under £20.	£20 and under £30.	£30 and under £40.	£40 and under £50.	£50 and upwards.	Total in each Ward.
1.	Calton . .	6	299	1,320	1,451	1,595	489	142	164	5,466
2.	Canongate . .	58	1,021	1,527	1,110	1,246	292	109	33	5,396
3.	Newington . .	2	147	312	497	1,599	710	475	1,688	5,430
4.	Morningside . .	1	38	55	153	987	1,832	1,531	1,854	6,451
5.	Merchiston . .	...	26	256	517	2,066	1,452	450	944	5,711
6.	Gorgie . .	14	85	1,589	1,580	2,418	382	124	70	6,262
7.	Haymarket . .	4	138	401	625	1,118	472	184	1,470	4,412
8.	St. Bernard's . .	16	334	499	408	1,192	1,225	183	885	4,742
9.	Broughton . .	7	159	556	862	1,122	663	316	266	3,951
10.	St. Stephen's . .	17	511	790	815	1,031	545	318	577	4,604
11.	St. Andrew's . .	19	836	636	326	255	107	69	668	2,916
12.	St. Giles . .	37	1,305	1,591	627	815	147	68	89	4,679
13.	Dalry . .	1	227	2,031	1,939	969	47	9	1	5,224
14.	George Square . .	22	716	1,107	849	1,363	465	258	249	5,029
15.	St. Leonard's . .	40	1,317	1,854	893	654	234	119	41	5,152
16.	Portobello . .	7	242	523	927	2,131	977	702	672	6,181
17.	South Leith . .	1	258	1,407	2,064	2,611	342	178	120	6,981
18.	North Leith . .	12	863	1,808	960	551	99	39	31	4,363
19.	West Leith . .	6	575	1,093	595	720	528	469	810	4,796
20.	Central Leith . .	1	293	1,592	663	512	96	33	16	3,206
21.	Liberton . .	53	342	805	194	226	200	167	272	2,259
22.	Colinton . .	16	231	390	179	160	225	161	408	1,770
23.	{ Corstorphine and Cramond }	32	249	270	259	498	919	488	679	3,394
Total . .		372	10,212	22,412	18,493	25,839	12,448	6,592	12,007	108,375
Edinburgh Area . .		251	7,401	15,047	13,579	20,561	10,039	5,057	9,671	81,606
Leith Area . .		20	1,989	5,900	4,282	4,394	1,065	719	977	19,346
Suburban Area . .		101	822	1,465	632	884	1,344	816	13,59	7,423

The increase in the number of occupied houses during the year was 671. The principal additions took place in Newington Ward, 294 ; Corstorphine and Cramond, 223 ; Portobello 151 ; and Colinton, 107.

A decrease of 324 in the number of occupied houses falls to be recorded in the overcrowded St. Leonard's Ward. In the last two years there has been a reduction of 711 houses in this Ward. The housing conditions in St. Leonard's have been for years the subject of much adverse criticism in these Reports, and the gratifying decrease in the number of houses is largely due to the Clearance Schemes now in progress in the district.

Improvement Schemes.—In the month of October a report was submitted to the Public Health Committee outlining a programme for future improvement schemes in the City.

The following statement shows the districts where it is proposed that certain badly congested areas should be selected for clearance.

Ward.	Number of Houses.	Number of Persons.	Acreage.	Density per Acre.		Death Rate per 1000.	Infantile Mortality.
				Houses.	Persons.		
Canongate . .	1,444	5,325	10·07	143·4	528·8	19·9	132
St. Stephen's . .	124	458	0·57	217·5	803·7	21·8	182
St. Andrew's . .	501	1,577	2·64	189·8	597·3	24·0	161
St. Giles . .	845	3,000	4·66	181·3	643·8	14·6	144
George Square . .	466	1,503	3·22	144·7	466·8	23·9	88
South Leith . .	232	938	2·89	80·3	324·6	16·0	133
North Leith . .	1,142	4,915	7·97	143·3	616·7	16·9	138
West Leith . .	377	1,356	3·46	108·9	391·9	15·5	83
Central Leith . .	68	315	0·75	90·7	420·0	15·8	166
Total . .	5,199	19,387	...	...	...	...	...

It will be seen that it is proposed to deal with 5,199 houses, and this will affect a population of 19,387 persons in the combined areas.

The area showing the highest density of population is situated in St. Stephen's Ward. The general death-rate and the infantile mortality are also excessive. This, however, is a small, badly congested area comprising only 124 houses, and equally high rates are to be found in portions of the larger districts such as Canongate and North Leith.

The condition of the various properties and of the individual houses must be kept in view when selecting an area for clearance, and there can be no question that while the conditions in all the areas are very bad, those situated in the Canongate, North Leith, St. Giles, and George Square Wards demand the most urgent attention.

The houses in these areas are very old, and show all the defects associated with the high tenement buildings of the "Old Town." The districts are badly congested, and in many instances individual houses are seriously overcrowded.

Since the report referred to was submitted to the Public Health Committee, the Local Authority has decided to proceed with the Canongate section of the programme.

The following Table shows the number of houses dealt with and the population affected in the five improvement schemes promoted by the Local Authority since 1923.

IMPROVEMENT SCHEME AREA.	Houses Dealt With.	Population Affected.
Cowgate-Grassmarket, 1923	630	1,429
Leith, 1924	678	2,444
Canongate-Corstorphine, 1927	293	556
St. Leonard's (1st Section), 1927	758	2,619
St. Leonard's (2nd Section), 1929	1,544	5,375
Totals	3,903	12,423

Housing Schemes.—I am indebted to the City Chamberlain for the particulars submitted in the following Tables.

The total number of houses erected by the Corporation up to the 31st December 1930 was 6,000. Of these, 4,632 were of three apartments, 978 of two apartments, 252 of four apartments, and 138 of five apartments.

The following Table shows the distribution of the houses in the various Corporation Housing Areas :—

Housing Area.	Houses Completed at 31st Dec. 1930.	Housing Area.	Houses Completed at 31st Dec. 1930.
Abercorn	518	Longstone	48
Bangholm	24	Portobello	34
Corstorphine	92	Prestonfield (Imp. Scheme)	574
Dalkeith Road	18	Restalrig and Hawkhill	646
Dalmeny Street	108	St. Clair Street	66
Davidson's Mains	42	Saughton	499
Gilmerton	28	Sheriff Brae	18
Gorgie	734	Stenhousemills	764
Grassmarket	21	Wardie	494
Heriot Cross	24	Bungalows	141
Lochend (Imp. Scheme)	825	Reconstructions, etc.	156
Niddrie Mains	90	Sunnybank	18
Cameron Park	18	Total	6,000

An analysis of the housing figures showing the different types of houses is given below.

	Number of Apartments.								Totals.	
	Two.		Three.		Four.		Five.			
	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.
Housing Act, 1919 . .	192	12·3	996	63·9	234	15·0	138	8·8	1,560	26·0
„ „ 1923 . .	18	100·0	...	...	...	...	...	...	18	·3
„ „ 1924 . .	402	14·1	2,434	85·3	17	·6	...	...	2,853	47·5
Improvement Schemes .	362	23·3	1,190	76·7	...	...	...	...	1,552	25·9
Post-war-Non-State-Aided .	4	23·5	12	70·6	1	5·9	...	...	17	·3
Totals . .	978	16·3	4,632	77·2	252	4·2	138	2·3	6,000	100·0

Since the 1st January 1919 to the close of the year under report, the Dean of Guild Court has passed plans for 13,126 houses as follows :—

2 Apartments	1,017
3 „	6,176
4 „	3,621
5 „	1,837
6 „ and over	475
Total	<u>13,126</u>

VITAL STATISTICS.

The accompanying Table gives a general survey of the increase which has taken place in the population of the City since 1861, and also shows the number of births and deaths with the rates per 1,000 of the population. The Infantile Mortality is also given.

It should be noted that the figures throughout the Table have been corrected, where necessary, to remove errors in estimating the population for intercensal years.

Years.	Population.	Deaths.	Rate per 1000.	Births Registered.	Rate per 1000.	Infantile Mortality.
†1861	170,444	3946	23.1	5694	33.4	135
†1871	196,979	5484	27.8	6874	34.8	151
†1881	228,346	4308	18.8	7360	32.2	128
1882	232,602	4292	18.4	7351	31.6	121
*1883	239,910	4275	17.8	6844	28.5	128
1884	242,802	4556	18.7	7481	30.8	135
*1885	245,447	4241	17.2	7372	29.9	120
1886	248,121	4555	18.3	7451	30.0	136
1887	250,824	4824	19.2	7641	30.4	137
1888	253,264	4374	17.2	7500	29.6	128
1889	256,318	4415	17.2	7414	28.9	133
*1890	259,110	4999	19.2	7177	27.6	144
†1891	261,225	5257	20.1	7382	28.2	138
1892	265,573	4746	17.8	7169	26.9	135
1893	269,105	4830	17.9	7434	27.6	148
1894	272,683	4350	15.9	7207	26.4	125
1895	276,309	5246	18.9	7402	26.6	152
1896	279,983	4275	15.2	7610	27.1	122
*1897	297,198	5782	19.4	7990	26.8	164
1898	301,305	5320	17.6	8097	26.8	141
1899	305,468	5396	17.6	8218	26.9	147
*1900	309,688	5396	17.4	8129	26.2	132
†1901	316,921	5633	17.7	7920	24.9	143
*1902	317,880	5113	16.0	7909	24.8	119
1903	318,219	4963	15.5	8112	25.4	117
1904	318,560	4995	15.6	7777	24.4	125
1905	318,777	4799	15.0	7741	24.2	124
1906	319,120	4868	15.2	7649	23.9	112
1907	319,464	4978	15.5	7504	23.4	121
1908	319,809	4690	14.6	7506	23.4	114
1909	320,282	5106	15.9	7410	23.1	113
1910	320,504	4651	14.5	7063	22.0	103
†1911	320,829	4652	14.4	§6507	20.8	115
1912	321,119	4701	14.6	6346	19.7	110
1913	321,645	4630	14.3	6243	19.4	101
1914	325,780	5025	15.4	6466	19.8	110
1915	323,388	5419	16.7	5851	18.1	132
1916	321,993	4812	14.9	5748	17.8	100
1917	320,116	4924	15.3	4913	15.3	123
1918	318,250	5090	16.0	4830	15.1	94
1919	316,390	5583	17.6	5612	17.7	117
1920	314,193	4442	14.2	7774	24.7	89
*†1921	420,264	6048	14.4	9028	21.5	96
1922	422,547	6447	15.3	8772	20.8	91
1923	422,169	5875	13.9	8662	20.5	82
1924	419,291	6312	15.0	8404	20.0	89
1925	421,968	6138	14.5	7843	18.6	96
1926	424,025	5710	13.5	7926	18.7	80
1927	425,147	6066	14.3	7621	17.9	80
1928	428,454	5872	13.7	7420	17.3	75
1929	427,538	6442	15.1	7304	17.1	80
1930	425,951	6038	14.2	7307	17.2	82

* City boundaries extended.

† Census year.

§ The Births from this year onward are corrected for transfer births, *i.e.*, births to parents domiciled outwith the City are excluded, while births occurring to Edinburgh parents beyond the City are included.

MARRIAGES.

In 1930, 3,693 marriages were registered in Edinburgh, as compared with 3,955 in 1929 and 3,760 in 1928. The marriage of 7,386 persons represents a rate of 17·3 per 1,000 of the population.

The marriages registered during the year include 1,007 by declaration before the Sheriff. It is well known that a large percentage of these "irregular" marriages are contracted by persons who simply come to the City for this purpose, but no definite data is available to show the actual numbers.

The number of marriages registered in each quarter of the year was as follows :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
766	893	1,143	891	3,693

BIRTHS.

During the year 7,994 births were registered in the City. After the necessary adjustments had been made for outward and inward transfers, it was found that the actual number of births to be allocated to the City was 7,307. This was equivalent to a birth-rate of 17·2 per 1,000 of the population as compared with 17·1 for the preceding year.

The birth-rates in the various wards are set out in the Table on page 10, while the following statement gives details regarding the number of corrected births registered in each quarter of the year :—

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st .	1,892	1,772	120	6·3
2nd .	1,836	1,731	105	5·7
3rd .	1,765	1,646	119	6·7
4th .	1,814	1,717	97	5·3
Total .	7,307	6,866	441	6·0

DEATHS AND DEATH-RATES.

The deaths of 6,833 persons were registered in the City during 1930. The death-rate calculated on this figure is equal to 16·0 per 1,000 of the estimated population.

These figures had, however, to be corrected by excluding 1,003 deaths of non-residents which occurred in public institutions and private nursing homes, and including 208 deaths of Edinburgh citizens which were transferred from various parts of Scotland.

The following Table shows the number of deaths in the City and the outward and inward transfers in each quarter of the year. The death-rates are based on the net number of city deaths :—

Quarter.	Total Deaths Registered.	Transferred to other Districts.	Transferred from other Districts.	Net City Deaths.	Death-rates per 1000.
1st .	1,961	235	48	1,774	16·7
2nd .	1,752	264	54	1,542	14·5
3rd .	1,463	262	56	1,257	11·8
4th .	1,657	242	50	1,465	13·8
Total .	6,833	1,003	208	6,038	14·2

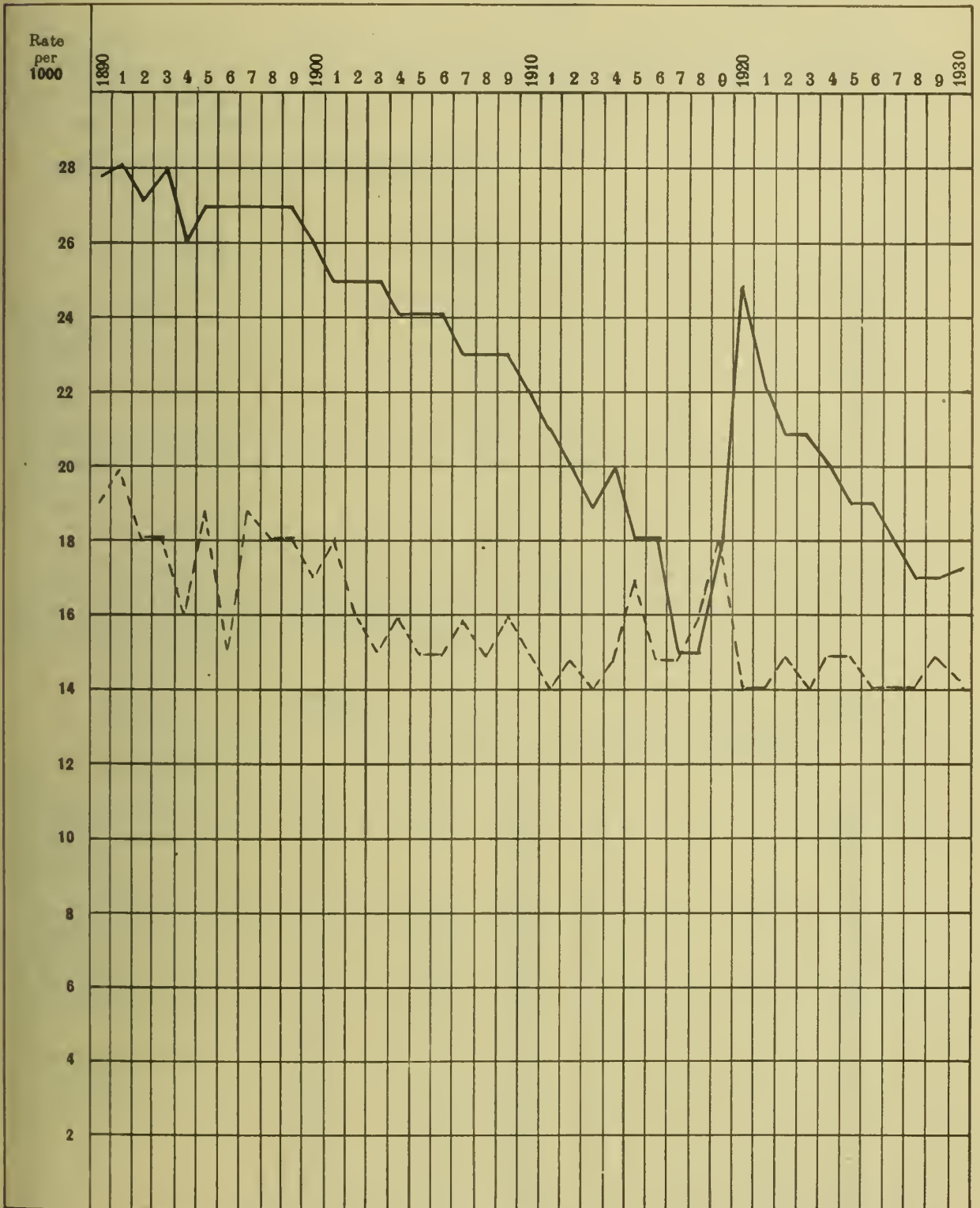
The actual number of deaths allocated to the City after making the adjustments referred to was 6,038, and this was equivalent to a death-rate of 14·2 per 1,000 of the population. The corrected deaths are 404 fewer and the death-rate ·9 per 1,000 less than in 1929.

The annual death-rates for the last five years were as follows :—

Year	1926.	1927.	1928.	1929.	1930.
Death-rate . . .	13·5	14·3	13·7	15·1	14·2

EDINBURGH.

BIRTH AND DEATH-RATES PER 1000 OF POPULATION.



Birth-Rate —————

Death-Rate - - - - -

The distribution of the deaths according to the different areas of the City and the death-rates per 1,000 of the population resident in each area are given below :—

Area.	Number of Deaths.	Death-rates per 1000.
Edinburgh	4,373	14·3
Leith	1,066	13·6
Suburban	354	11·6
Institutions	238	...
Military Quarters	7	...
Whole City	<u>6,038</u>	<u>14·2</u>

The death-rates in the undernoted Table have been extracted from the Registrar-General's Reports. The rates recorded in 1930 varied from 10·3 in Clydebank to 15·9 in Dundee. In Glasgow the rate was 14·3 and in Edinburgh 14·2. The death-rate for the whole of Scotland was 13·2.

Death-rates per 1,000 of the population :—

TOWN.	YEAR.				
	1926.	1927.	1928.	1929.	1930.
Glasgow	15·1	14·6	14·8	16·5	14·3
Edinburgh	13·5	14·3	13·7	15·1	14·2
Dundee	14·8	16·9	15·1	16·0	15·9
Aberdeen	13·4	13·8	14·0	15·3	13·1
Paisley	14·2	13·1	13·1	15·1	14·5
Greenock	13·7	13·3	15·7	15·6	13·7
Motherwell and Wishaw	11·0	11·2	11·0	11·3	11·3
Clydebank	10·6	10·7	10·8	11·7	10·3
Scotland	13·0	13·5	13·3	14·5	13·2

Ward Mortality.—The following Table gives particulars relating to density, housing, and the more important vital statistics in the various wards, while more detailed information will be found in the Table on page 10.

Ward.	Density of Population per Acre.	Housing.		Death-rate per 1000.			Infantile Mortality.
		1 Room.	2 Rooms.	All Causes.	Phthisis.	Epidemic Diseases.	
Calton	92·1	228	1,838	13·3	·6	·9	80
Canongate	21·6	514	2,287	14·4	1·1	1·2	108
Newington	22·0	110	608	15·6	·6	·6	91
Morningside	15·0	13	159	15·0	·5	...	13
Merchiston	29·3	45	753	13·8	·5	·1	47
Gorgie	37·5	62	2,424	10·7	·6	·4	67
Haymarket	17·0	158	502	13·4	·5	·5	50
St. Bernard's	14·4	164	817	11·9	·7	·4	36
Broughton	30·7	180	1,098	12·5	·4	·5	76
St. Stephen's	85·9	433	914	15·7	·7	·6	76
St. Andrew's	50·6	724	756	17·1	1·2	·8	108
St. Giles	69·7	1,124	1,684	19·3	1·6	1·6	106
Dalry	109·8	224	3,185	13·1	·7	·8	64
George Square	80·5	623	1,572	16·6	1·1	·8	91
St. Leonard's	179·3	914	2,190	17·1	·8	1·4	102
Portobello	11·7	104	1,186	11·4	·8	·5	75
South Leith	34·6	166	2,817	11·9	·6	·7	89
North Leith	85·2	515	2,072	16·2	1·3	1·1	93
West Leith	39·4	272	1,533	12·5	·6	·5	81
Central Leith	95·1	187	1,763	14·6	1·0	·6	58
Liberton	1·6	144	989	12·9	·8	·4	101
Colinton	1·3	67	601	11·3	·6	·4	74
Corstorphine and Cramond	1·6	45	503	10·8	·5	·1	86
Total—Extended Area	13·1	7,016	32,251	14·2	·8	·7	82
Edinburgh Area	28·8	5,620	21,973	14·3	8	·7	78
Leith Area	48·5	1,140	8,185	13·6	9	·8	83
Suburban Area	1·6	256	2,093	11·6	6	·3	89

In regard to the mortality experienced in the different Wards, the statistics for the year under report only serve to emphasise the observations made in previous annual reports. In the Central Wards there is still much overcrowding of individual houses and an excessive density of population, with all the accompanying insanitary conditions.

In recent years clearance schemes have been carried out in the Wards referred to, both in Edinburgh and Leith, but further improvements are necessary. There are, however, difficulties in the way of re-housing the displaced population, and some time must elapse before all the "black spots" can be removed.

The highest general death-rate in the City was again returned for the old town St. Giles Ward, viz., 19·3 per 1,000 of the population. The mortality from pulmonary tuberculosis and epidemic diseases was 1·6 per 1,000 in each case. These rates also represent the highest Ward incidence in the City. The infantile mortality for St. Giles was equivalent to 106 deaths per 1,000 births, as compared with 82 in 1929.

In St. Andrew's Ward, another central district, the general death-rate was 17·1, while the deaths from pulmonary tuberculosis accounted for 1·2 per 1,000 of the population. The infantile mortality was 108 or 13 per 1,000 less than the rate for 1929.

St. Leonard's Ward, where two extensive Slum Clearance Schemes are in progress, returned a general death-rate of 17·1 per 1,000. The death-rate from pulmonary tuberculosis was extremely low for this Ward, viz., ·8. The deaths from epidemic diseases numbered 27 or 1·4 per 1,000 of the population. Of these deaths, 14 were due to measles, which was very prevalent in the Ward during the early months of the year. The infantile mortality for the Ward was 102 as compared with 93 in 1929.

All the other Wards in the Edinburgh Area with the exception of George Square (16·6), St. Stephen's (15·7), Newington (15·6), Morningside (15·0), and Canongate (14·4), return death-rates below that recorded for the whole City.

In comparing the four Wards comprising the Leith area of the City, it is found that the North Ward shows a general death-rate of 16·2 per 1,000 of the population. The pulmonary tuberculosis rate was 1·3, while for the epidemic diseases taken collectively the rate was 1·1. The infantile mortality for the Ward was comparatively low, viz., 93 deaths per 1,000 births.

The Central Ward returns the remarkably low general death-rate of 14·6, and a tuberculosis rate of 1·0 per 1,000. The deaths of infants numbered 18 and the births 308. The infantile mortality calculated on these figures was equal to 58 as compared with 98 in 1929.

In the South and West Wards the death-rates from all causes were 11·9 and 12·5 respectively. The other statistics relating to the Wards were equally favourable.

The general death-rates in the three suburban Wards are all below the rate recorded for the City. In Liberton the rate was 12·9, in Colinton 11·3, and in Corstorphine and Cramond 10·8.

The following diagram shows the death-rate experienced in each of the twenty-three municipal Wards, and in the Table on page 10 detailed particulars are given regarding the vital statistics in the various Wards.

DEATH-RATE—ALL CAUSES.

PER 1000 OF POPULATION.

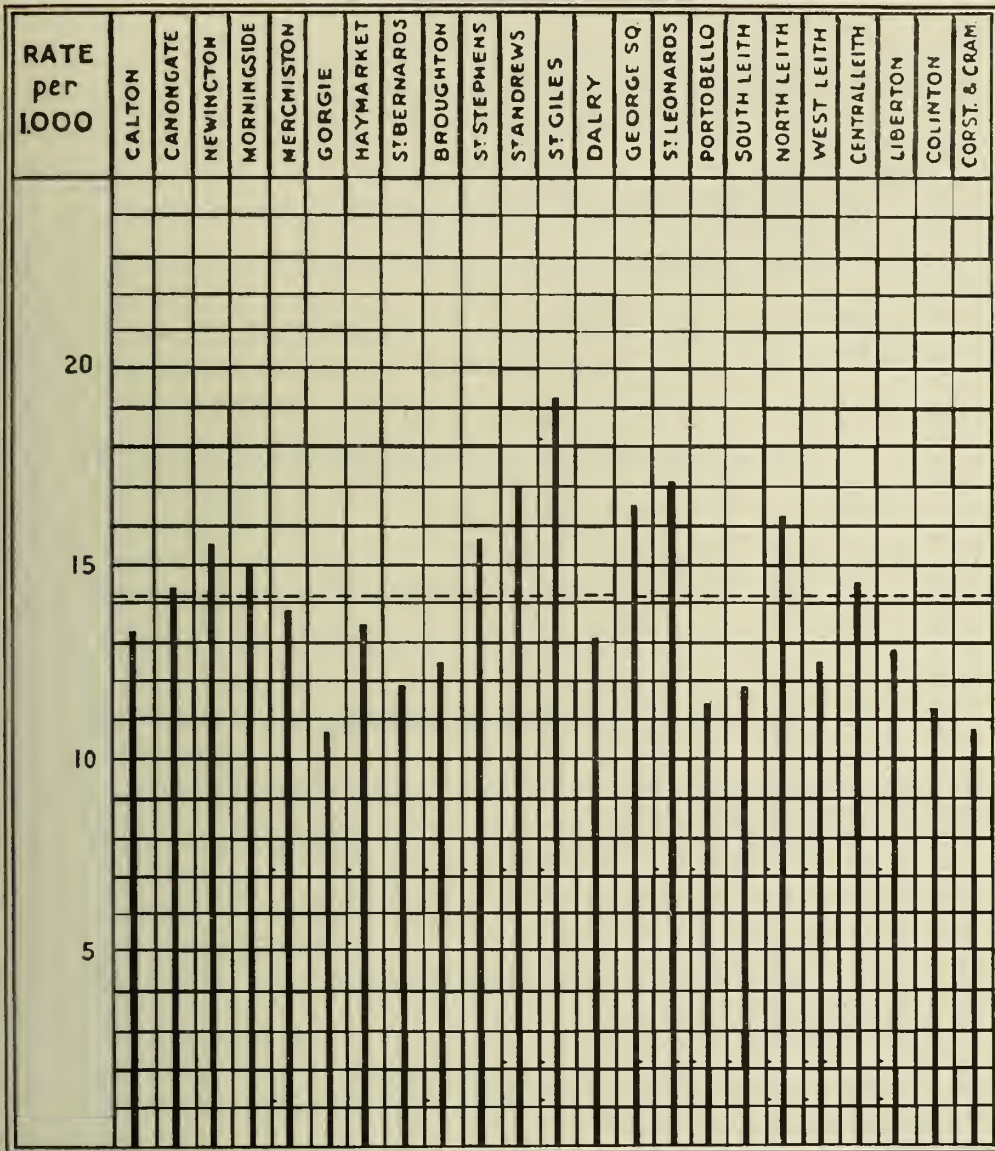


Table showing the Population etc., also the Births and Deaths in each Ward during the year.

WARD.	Estimated Population.	Area in Acres.	Density of Population per Acre.	BIRTHS.		INFANTILE MORTALITY.		DEATHS.							
				Number.	Rate per 1000.	Deaths.	Rate per 1000 Births.	PULMONARY PHTHISIS.		* EPIDEMIC DISEASES.		OTHER CAUSES.		ALL CAUSES.	
								Number.	Rate per 1000.	Number.	Rate per 1000.	Number.	Rate per 1000.	Number.	Rate per 1000.
Calton	21,009	228	92.1	364	17.3	29	80	13	.6	18	.9	250	11.8	281	13.3
Canongate	20,842	965	21.6	435	20.8	47	108	22	1.1	27	1.2	253	12.1	302	14.4
Newington	19,618	891	22.0	276	14.1	25	51	12	.6	12	.6	283	14.4	307	15.6
Morningside	20,416	1,358	15.0	152	7.4	2	13	11	.5	...	...	296	14.5	307	15.0
Merchiston	19,846	677	29.3	212	10.7	10	47	9	.5	2	.1	263	13.2	274	13.8
Gorgie	25,333	676	37.5	552	21.8	37	67	16	.6	12	.4	245	9.7	273	10.7
Haymarket	16,290	959	17.0	221	13.6	11	50	9	.5	9	.5	201	12.4	219	13.4
St. Bernard's	18,007	1,250	14.4	247	13.7	9	36	13	.7	7	.4	195	10.8	215	11.9
Broughton	14,508	472	30.7	223	15.4	17	76	6	.4	8	.5	168	11.6	182	12.5
St. Stephen's	16,320	190	85.9	263	16.1	20	76	11	.7	10	.6	236	14.4	257	15.7
St. Andrew's	10,424	206	50.6	186	17.8	20	108	13	1.2	9	.8	157	15.1	179	17.1
St. Giles	18,539	266	69.7	386	20.8	41	106	29	1.6	30	1.6	299	16.1	358	19.3
Dalry	20,527	187	109.8	360	17.5	23	64	15	.7	17	.8	238	11.6	270	13.1
George Square	19,966	248	80.5	330	16.5	30	91	23	1.1	17	.8	293	14.7	333	16.6
St. Leonard's	18,652	104	179.3	442	23.7	45	102	15	.8	27	1.4	277	14.9	319	17.1
Portobello	25,828	2,200	11.7	453	17.5	34	75	20	.8	15	.5	262	10.1	297	11.4
South Leith	28,342	819	34.6	538	19.0	48	89	18	.6	21	.7	300	10.6	339	11.9
North Leith	18,566	218	85.2	460	24.8	43	93	24	1.3	21	1.1	256	13.8	301	16.2
West Leith	18,222	462	39.4	321	17.6	26	81	11	.6	9	.5	208	11.4	228	12.5
Central Leith	13,504	142	95.1	308	22.8	18	58	14	1.0	8	.6	176	13.0	198	14.6
Liberton	10,532	6,339	1.6	179	17.0	18	101	8	.8	4	.4	124	11.7	136	12.9
Colinton	7,128	5,602	1.3	95	13.3	7	74	4	.6	3	.4	74	10.3	81	11.3
Corstorphine and Cramond	12,740	8,067	1.6	142	11.1	12	86	6	.5	1	.1	130	10.2	137	10.8
Institutions	8,694	...	...	117	...	22	...	10	...	11	...	217	...	238	...
Military Quarters	2,098	...	...	45	...	2	...	1	...	1	...	5	...	7	...
Totals	425,951	32,526	13.1	7,307	17.2	596	82	333	.8	299	.7	5,406	12.7	6,038	14.2

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhoea and Enteritis under 2 years.

NOTE.—The Ward populations have been adjusted by deducting the population resident in the principal institutions and military quarters. Births and deaths occurring in institutions are allocated to Wards, except in cases where a permanent domicile cannot be established.

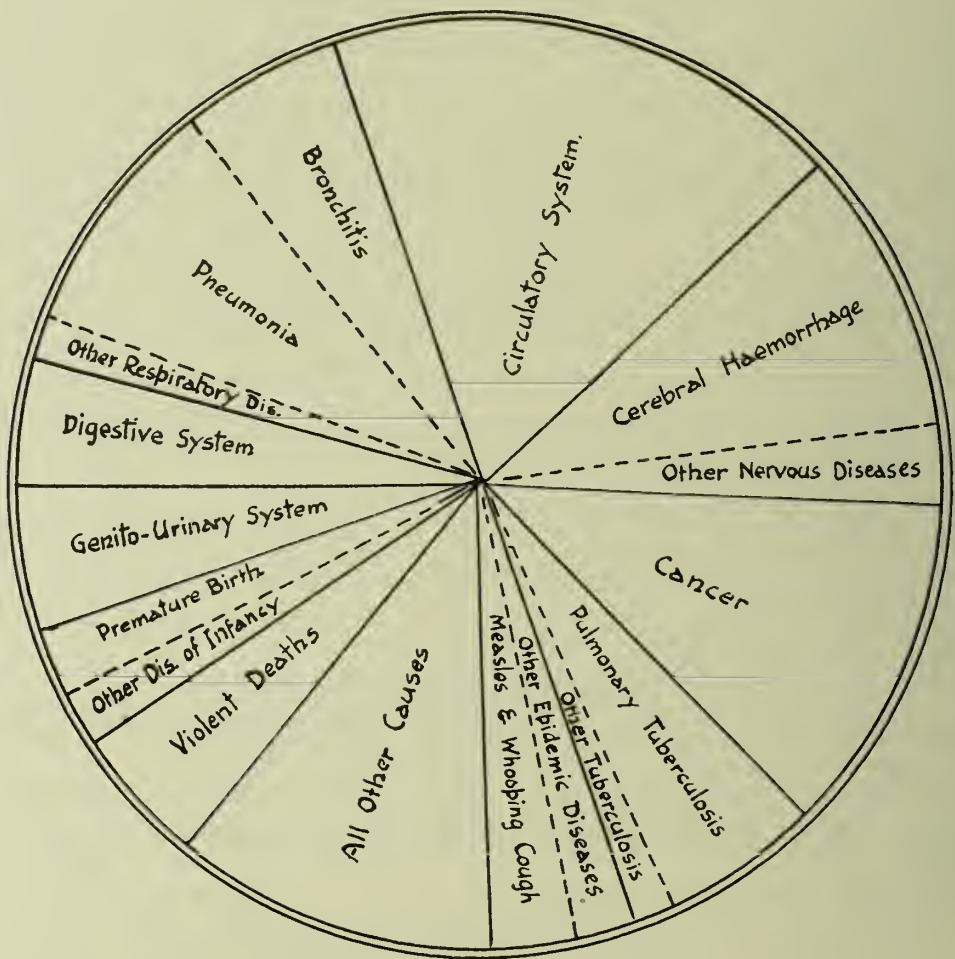
	Annual Death- rate per 1000	All Ages	Under 1 Year	1 and under 5 Years	Total under 5 Years	5 and under 10 Years	10 and under 15 Years	15 and under 25 Years	25 and under 35 Years	35 and under 45 Years	45 and under 55 Years	55 and under 65 Years	65 and under 75 Years	75 Years and up- wards	Total above 5 Years
Age Distribution of Population	.	425,951	6,716	26,220	32,936	35,826	39,466	80,234	64,907	59,756	51,928	34,450	19,112	7,336	393,015
Deaths from all Causes	.	6,038	596	336	932	100	53	196	267	343	567	977	1,310	1,293	5,106
Annual Death-rate per 1000	88.7	12.8	28.3	2.8	1.3	2.4	4.1	5.7	10.9	28.4	68.5	176.1	13.0
Enteric Fever	.	*2	...	...	...	...	...	...	...	1	1	...	...	...	2
Typhus Fever
Smallpox
Measles	.	106	26	76	102	3	1	...	...	...	...	...	...	...	4
Scarlet Fever	.	7	...	3	3	2	...	...	1	...	1	...	...	...	4
Whooping Cough	.	72	28	42	70	2	...	...	...	...	...	...	...	...	2
Diphtheria and Croup	.	71	2	40	42	24	2	...	2	1	...	...	...	...	29
Influenza (Sole Cause)	.	10	1	...	1	...	...	...	2	...	...	...	...	...	9
Erysipelas	.	21	3	1	4	...	...	...	2	...	...	2	2	3	17
Encephalitis Lethargica	.	17	...	1	1	...	...	...	1	...	...	1	6	5	16
Cerebro-Spinal Meningitis	.	32	13	7	20	2	...	...	2	...	...	...	...	...	12
Tuberculosis of Respiratory System	.	333	2	6	8	3	4	66	67	60	62	45	15	3	325
Tuberculous Meningitis	.	41	6	9	15	6	4	8	4	3	...	1	...	...	16
Tuberculosis of Intestines and Peritoneum	.	25	3	4	7	2	1	4	5	2	...	1	...	...	18
Other Tuberculous Disease	.	24	...	8	8	2	...	5	1	1	1	1	4	1	16
Malignant Disease	.	716	...	1	1	...	...	1	13	44	109	201	238	109	715
Rheumatic Fever	.	12	...	...	...	3	1	4	2	...	1	...	1	...	12
Meningitis	.	20	5	5	10	1	2	2	1	1	...	...	1	...	10
Cerebral Haemorrhage, Apoplexy, Hemiplegia	.	603	...	...	...	...	...	2	4	14	...	112	229	...	603
Other Nervous Diseases	.	147	13	3	16	...	...	7	10	14	16	30	24	24	131
Heart Disease	.	964	1	3	4	5	6	13	16	39	85	192	314	290	960
Other Diseases of Circulatory System	.	128	1	...	1	...	...	1	1	4	13	19	36	53	127
Bronchitis	.	337	23	6	29	...	1	...	5	12	31	51	88	120	308
Pneumonia (all forms)	.	526	99	74	173	5	4	16	21	34	49	67	83	74	353
Other Diseases of Respiratory System	.	67	9	3	12	...	2	4	2	3	7	10	5	22	55
Diarrhoea and Enteritis	.	56	38	5	43	...	...	...	...	...	3	2	1	7	13
Appendicitis	.	40	...	3	3	3	3	3	4	...	3	7	6	3	37
Diseases of Liver (non-Malignant)	.	54	1	...	1	1	...	...	1	3	5	12	16	15	53
Other Diseases of Digestive System	.	168	9	5	14	5	2	6	12	15	23	32	35	24	154
Nephritis—Acute and Chronic	.	205	...	1	1	2	2	6	12	10	21	59	47	45	204
Other Genito-Urinary Diseases	.	99	9	1	10	...	...	...	2	9	10	15	28	25	89
Puerperal Sepsis	.	13	...	...	...	...	...	1	9	3	...	...	...	...	13
Other Diseases and Accidents of Childbirth	.	46	...	...	...	...	...	6	22	17	1	...	...	...	46
Diseases of Early Infancy and Malformations	.	273	268	3	271	...	...	...	...	...	...	...	...	...	2
Violent Deaths	.	283	11	14	25	22	7	19	30	...	...	54	...	...	258
All Other Causes	.	520	25	12	37	5	5	14	14	21	37	56	102	229	483

* Paratyphoid.

CAUSES OF DEATH.

In the Table on page 11 the principal causes of death are classified according to disease groups and age periods.

The proportion of some of the disease groups to the total deaths occurring during 1930 is shown in the following diagram.



Epidemic Diseases.—The diseases allocated to the epidemic group include enteric fever, measles, scarlet fever, whooping cough, diphtheria, and diarrhoea and enteritis in children under the age of two years.

The deaths classified in this group numbered 299, and the death-rate was equal to $\cdot 7$ per 1,000 of the population. In 1929 the epidemic diseases caused 150 deaths or $\cdot 4$ per 1,000.

The increase in the number of deaths was chiefly caused by measles and whooping cough, both of which were extremely prevalent in the City in the early months of the year. These diseases together accounted for 178 deaths, as compared with 39 in the previous year.

The following statement shows the number of deaths from the respective diseases classified in the epidemic group during the last five years :—

	1926.	1927.	1928.	1929.	1930.
Enteric Fever	6	3	3	2	2
Measles	42	71	77	...	106
Scarlet Fever	36	17	8	3	7
Whooping Cough	17	43	80	39	72
Diphtheria	43	43	30	56	71
Diarrhoea and Enteritis . .	50	42	44	50	41
	<u>194</u>	<u>219</u>	<u>242</u>	<u>150</u>	<u>299</u>

Further detailed information regarding these diseases will be found under the heading " Infectious Diseases " on page 16.

Influenza.—There was no excessive prevalence of influenza during the year and only in 10 cases was it certified as the sole cause of death. In another 44 instances influenza was stated to have been a contributory cause. Of these latter deaths, 27 were complicated with pneumonia, 2 with bronchitis, and the remainder with various other causes.

Tuberculosis.—The deaths attributed to all forms of tuberculous disease numbered 423—211 males and 212 females. The death-rate was equivalent to .99 per 1,000 persons living as compared with 1.1 in 1929.

Of the 423 deaths caused by tuberculous disease, 333 were ascribed to the respiratory system, 41 to tuberculous meningitis, 25 to intestines and peritoneum, and 24 to tuberculosis of other organs or regions.

The death-rate for respiratory tuberculosis taken separately was .8 per 1,000 of the population, the same as recorded for the two preceding years.

The subject of tuberculosis is more fully referred to by the Tuberculosis Officer in his Report on page 25.

Cancer.—The total number of deaths certified during the year as due to malignant disease was 716, as compared with 759 in 1929 and 687 in 1928. The mortality among males was equal to a rate of 1.6 and among females 1.7 per 1,000 living.

The mortality from cancer has been steadily on the increase throughout the country over a long series of years, and the following is the City's record since 1921 :—

1921 . . .	625 deaths.	1926 . . .	653 deaths.
1922 . . .	657 „	1927 . . .	716 „
1923 . . .	644 „	1928 . . .	687 „
1924 . . .	683 „	1929 . . .	759 „
1925 . . .	675 „	1930 . . .	716 „

It is difficult to determine how much of this increase in the number of deaths from malignant disease is due to improved methods of diagnosis and the more accurate certification of the disease. It is possible that a proportion of the deaths now classified as cancer would, a few years ago, have been certified as due to some other cause.

To whatever cause the increase may be attributed, the fact remains that the disease is annually exacting an increasingly heavy toll of the community, and it is to be hoped that the research which is constantly going on may soon result in a remedy being discovered to check the ravages of the disease.

In the accompanying Table the deaths from malignant disease are classified according to age and sex and the organ or site affected :—

SITE.		SEX AND AGE-PERIODS.																		TOTALS.		
		Under 15.		-20.		-25.		-35.		-45.		-55.		-60.		-65.		-75.			75 and up-wards.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.
Brain	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	3
Jaw, Face, and Ear	...	...	...	...	...	...	...	...	...	3	1	1	1	1	...	4	2	3	6	...	22
Tongue and Mouth	...	...	...	...	...	...	...	...	...	5	...	2	...	5	...	10	...	1	1	...	24
Larynx, Pharynx, and Neck	...	...	...	...	...	...	...	...	2	2	...	3	...	6	...	6	...	1	...	...	20
Thorax and Lungs	...	...	...	...	...	...	1	2	2	7	5	1	...	3	1	6	2	4	2	...	36
Breast	...	...	...	...	...	...	1	...	6	...	14	...	10	...	13	...	10	...	5	...	59
Stomach and Œsophagus	...	...	...	...	...	1	...	3	4	11	12	13	6	14	12	37	26	9	18	...	166
Liver and Gall Bladder	...	...	...	...	...	...	...	2	2	...	2	2	1	1	4	4	10	2	6	...	36
Intestines and Rectum	...	...	...	...	...	1	1	1	3	7	5	7	9	18	11	35	20	11	14	...	143
Pancreas	...	...	...	...	...	1	...	...	1	3	...	4	2	3	4	3	7	...	...	...	28
Pylorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Uterus	...	...	...	...	...	...	3	...	8	...	17	...	6	...	10	...	12	...	3	...	59
Ovaries and Vagina	...	...	...	...	1	...	...	...	4	...	8	...	2	...	3	...	4	...	3	...	25
Penis and Scrotum	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	3
Abdomen and Pelvis	...	...	...	...	...	...	...	...	...	...	3	2	3	...	2	4	9	...	2	...	25
Kidney	...	...	...	...	...	1	...	...	...	...	1	...	...	...	2	1	...	...	...	...	5
Prostate	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	7	...	5	...	...	15
Bladder	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3	3	1	3	...	13
Bones	...	...	...	...	...	...	...	...	...	...	1	2	2	...	...	3	1	1	...	...	10
Ductless Glands	...	...	...	...	...	1	1	2	...	...	...	1	...	...	3	3	1	5	...	...	17
Otherwise specified	...	1	...	...	...	...	...	1	...	...	1	...	...	...	1	...	1	...	1	...	6
Totals	M.	...	...	...	...	6	11	...	39	...	40	...	53	...	127	...	40	...	316	716	
	F.	1	1	7	33	70	45	63	111	69	400									

The following Table shows the number of cancer deaths occurring annually in Edinburgh since 1898, and the equivalent death-rates per 1,000 of the population.

YEAR.	MALE.	FEMALE.	TOTAL.	RATE PER 1000 LIVING.
1898	104	163	267	·8
1899	112	164	276	·9
1900	116	181	297	·9
1901	110	183	293	·9
1902	127	185	312	·9
1903	130	186	316	·9
1904	125	206	331	1·0
1905	124	220	344	1·0
1906	132	198	330	1·0
1907	120	224	344	1·0
1908	123	230	353	1·1
1909	130	243	373	1·1
1910	167	220	387	1·2
1911	154	251	405	1·2
1912	139	261	400	1·2
1913	146	255	401	1·2
1914	172	277	449	1·4
1915	187	248	435	1·3
1916	190	256	446	1·4
1917	162	257	419	1·3
1918	189	265	454	1·4
1919	158	274	432	1·3
1920	194	277	471	1·4
*1921	246	379	625	1·5
1922	273	384	657	1·5
1923	267	377	644	1·5
1924	290	393	683	1·6
1925	284	391	675	1·6
1926	276	377	653	1·5
1927	309	407	716	1·7
1928	305	382	687	1·6
1929	344	415	759	1·8
1930	316	400	716	1·7

* City Boundaries extended to include Leith and Suburban area.

Diseases of the Nervous System.—These deaths numbered 770, and included 370 classified as cerebral hæmorrhage, 139 as cerebral embolism or thrombosis, 74 as hemiplegia, and 20 as apoplexy. Of the total deaths in the nervous group, 26 referred to children under five years, 18 being infants in their first year.

Diseases of the Circulatory System.—The deaths from diseases allocated to this group numbered collectively 1,092—524 males and 568 females. There were 964 deaths ascribed to diseases of the heart, of which 282 were certified as due to valvular disease, 54 to angina pectoris, 28 to fatty degeneration, and 600 to various other heart conditions. Diseases of the blood vessels accounted for the remaining 128 deaths, and of these 79 were certified as arterio-sclerosis and 21 as aneurysm.

Diseases of the Respiratory System.—The number of deaths from respiratory diseases, other than those complicated with influenza, was 930, as compared with 1,092 in 1929 and 929 in 1928. The deaths from all forms of pneumonia numbered 526, while bronchitis was returned as the cause of death in 337 instances.

As regards the age incidence in the respiratory group, 214 were children under the age of five years, 131 being under one year, and of these 99 were due to pneumonia and 23 to bronchitis.

Diseases of the Digestive System.—The number of deaths registered as due to diseases of the digestive organs was 277. This figure does not include 41 deaths from diarrhœa and enteritis which, for statistical purposes, are included in the epidemic diseases group. Non-malignant diseases of the liver caused 54 deaths, ulceration of the stomach and duodenum 65, and appendicitis was certified as the cause of 40 deaths.

Diseases of the Genito-urinary System caused 304 deaths, as against 310 in 1929. The greater proportion of these deaths, viz., 205, were due to acute and chronic nephritis.

Deaths by Violence numbered 283—164 males and 119 females. There were 281 violent deaths recorded in 1929 and 285 in 1928.

INFECTIOUS DISEASES.

The various diseases falling to be dealt with under this heading are :—

- (1) Diseases which are notified in terms of Section 6 of the Infectious Disease (Notification) Act, 1889.
- (2) Diseases which have been added to the list by Orders made by the Department of Health for Scotland under Section 78 of the Public Health (Scotland) Act, 1897.
- (3) Measles and whooping cough, which have been made temporarily notifiable by the Local Authority.

The following Table shows the number of notifications for each month of the year :—

Disease.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup .	123	104	111	93	77	43	61	47	81	114	111	137	1,102
Erysipelas	40	39	32	34	36	15	21	19	12	23	32	36	339
Scarlet Fever	146	142	139	57	51	65	73	77	98	131	107	192	1,278
Typhus . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	1	1	1	1	1	5	6	9	5	1	3	1	35
Relapsing Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	7	10	3	7	7	5	3	4	11	4	13	7	81
Puerperal Pyrexia	7	11	13	14	7	4	7	5	3	2	7	7	87
Cerebro-spinal Fever	3	3	8	8	8	7	2	5	4	3	...	1	52
Infective Jaundice . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis, Pulmonary	40	52	46	69	46	45	49	42	37	39	42	51	558
Tuberculosis, other forms	29	21	26	30	31	18	35	18	15	31	16	25	295
Ophthalmia Neonatorum	1	3	2	3	...	1	2	2	2	2	2	1	21
Malaria	1	...	...	1	1	1	...	...	2	1	...	...	7
Dysentery . . . . .	...	...	...	4	1	1	...	1	...	1	1	1	10
Trench Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia	132	73	105	55	53	47	33	19	23	23	36	74	673
Acute Influenzal Pneumonia	13	11	11	16	5	1	2	...	...	3	4	6	72
Measles	56	39	320	1280	2285	2283	714	155	23	12	7	8	7,182
Whooping Cough	122	135	230	297	314	242	80	63	44	49	36	26	1,639
Poliomyelitis	2	3	...	...	2	1	...	...	5	1	...	...	14
Polio-encephalitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica . . . . .	...	3	2	...	...	1	1	...	...	...	1	...	8
Chickenpox	134	105	157	138	85	82	74	46	41	37	75	106	1,080
Totals	857	755	1206	2107	3010	2867	1163	512	406	477	493	679	14,532

Enteric Fever.—During the year 35 cases of infection associated with the enteric group were notified. Four of the cases were infections with *B. Typhosus* while the remainder were *B. Paratyphosus B.* An analysis of the notifications showed that of the *B. Typhosus* infections, one case came from a family in which there was a previous history of this disease, although no carrier was detected. Another case was infected while at a Scout camp at Edzell, and the third contracted the disease while working in a laboratory. In the fourth case the origin of the infection was not discovered.

Of the paratyphoid cases, 5 occurred in patients admitted to institutions in Edinburgh from country districts while incubating the disease. Two further cases were infected abroad, and were landed from a ship at Leith.

Three cases infected by a carrier occurred at a private school for boys.

Of the remaining 21 cases, two occurred in one family and presumably derived their infection from the same source, and in two other cases there was a direct connection through friendship of the two families, thus giving 19 instances in which the source of infection was not detected.

It is an extremely difficult matter to trace the source of infection of sporadic cases of typhoid or paratyphoid fever. In most of the cases there is no history in the family of previous infection, and contacts on the whole, are extremely reluctant to allow specimens to be taken for bacteriological examination.

Diphtheria.—There were 1,102 cases of diphtheria notified during the year, representing an attack-rate of 2·5 per 1,000 of the population. The deaths numbered 71 and the case mortality equalled 6·4 per cent., as compared with 4·7 in 1929 and 4·8 in 1928.

The City was comparatively free from diphtheria during the summer months. An increase in the number of notifications, however, was noted immediately following the re-opening of the schools in the month of September after the annual holiday period.

During the last quarter of the year the notifications of diphtheria from the Craiglockhart district of the City assumed epidemic proportions. A considerable number of the children attending Craiglockhart Public School were affected, and alarm was caused to parents who were of opinion that the disease was being spread in the school. The incidence of diphtheria at the school was carefully watched, and it was observed that the cases did not occur in any special class but uniformly throughout the school. Any tendency towards a spread of the infection was checked by the immediate “swabbing” of the children in certain classes. By this means carriers were at once detected and removed for treatment. It should be noted that fully one-third of the notifications of children attending Craiglockhart School referred to contact “carriers.”

A meeting of the parents whose children were attending the school was addressed by Dr. Grierson, Assistant Medical Officer of Health, who, after reviewing the position at the school, emphasised the importance of having all children schick-tested. Consent forms were distributed, and as a result between five and six hundred children were tested—positive reactors being subsequently immunised.

It can be confidently stated that the epidemic was not spread in Craiglockhart School itself although many of the pupils attending there were affected. It was due rather to children playing together out of school hours as there were certain streets where the incidence of the disease was specially severe.

The number of cases of diphtheria notified in each of the last five years, together with the deaths and case-rates per cent. is given below :—

Year.	Notifications.	Deaths.	Rate per cent.
1926 . .	552	43	7·8
1927 . .	599	44	7·3
1928 . .	629	30	4·8
1929 . .	1,171	55	4·7
1930 . .	1,102	71	6·4

Scarlet Fever.—During the year, 1,278 cases of scarlet fever were reported, being equivalent to a case-rate of 3·0 per 1,000 of the estimated population. The type of disease present in the City was fortunately very mild, and only six deaths occurred among the cases notified.

The incidence of the disease was greatest during the first and last quarters of the year, when the cases numbered 427 and 430 respectively. The maximum number of notifications was received in the month of December—192 cases being intimated. The increased incidence was partly due to a localised “milk infection” discovered towards the end of the month, in which a dairy situated in the northern district of the City was involved.

On the 25th December a boy residing at the dairy in question was removed to hospital suffering from scarlet fever. The other members of the household were immediately examined, but no evidence of infection could be traced. The milk supplies for the previous few days had, however, been infected and cases continued to be reported. Fortunately, there was no serious outbreak and the cases were confined to a limited area.

The number of cases notified in each of the last five years, together with the deaths and case-rates per cent. is given below :—

Year.	Notifications.	Deaths.	Rate per cent.
1926 . .	1,852	32	1·7
1927 . .	1,848	19	1·0
1928 . .	1,046	6	·6
1929 . .	1,154	3	·3
1930 . .	1,278	8	·6

Cerebro-spinal Meningitis.—There was no serious outbreak of this disease during the year, only 52 cases being notified as compared with 63 in 1929.

The following statement shows the monthly distribution of the cases, which are generally more numerous in the spring and early summer.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
Cases . .	3	3	8	8	8	7	2	5	4	3	0	1	Total . 52

Of these cases, nine referred to children from country districts who had been sent to institutions in the City for treatment, and where they were subsequently diagnosed to be suffering from cerebro-spinal meningitis.

The disease is endemic in this country. The principal factors favouring an outbreak are overcrowding and lack of proper ventilation. The disease is most common in children and young adults and the age distribution of the cases notified during 1930 was as under :—

Under 1 year	15 cases.
1-5 years	15 „
5-15 „	7 „
15-25 „	8 „
25-45 „	4 „
45-65 „	3 „
Total	<u>52</u> „

The mortality from cerebro-spinal meningitis is always high, and 37 of the notified cases proved fatal. The death-rate per cent. of cases notified equalled 71·1, as compared with a case mortality of 76·2 in 1929.

Of the total deaths occurring in the City, 6 referred to non-residents and these, in accordance with the Registrar-General's Regulations, were transferred to the district of permanent domicile.

Measles.—Only the first case of measles occurring in a household requires to be notified, and during the year 7,182 such cases were reported to the Department.

The first indication that the disease was prevalent in the City appeared in the second week in March, and before the end of the month 320 “first cases” were intimated. The outbreak assumed epidemic proportions during the month of April, when a further 1,280 cases were notified. The notifications continued to increase rapidly and 4,568 cases occurred during May and June. From then onward the outbreak gradually subsided, the intimations becoming normal towards the end of August.

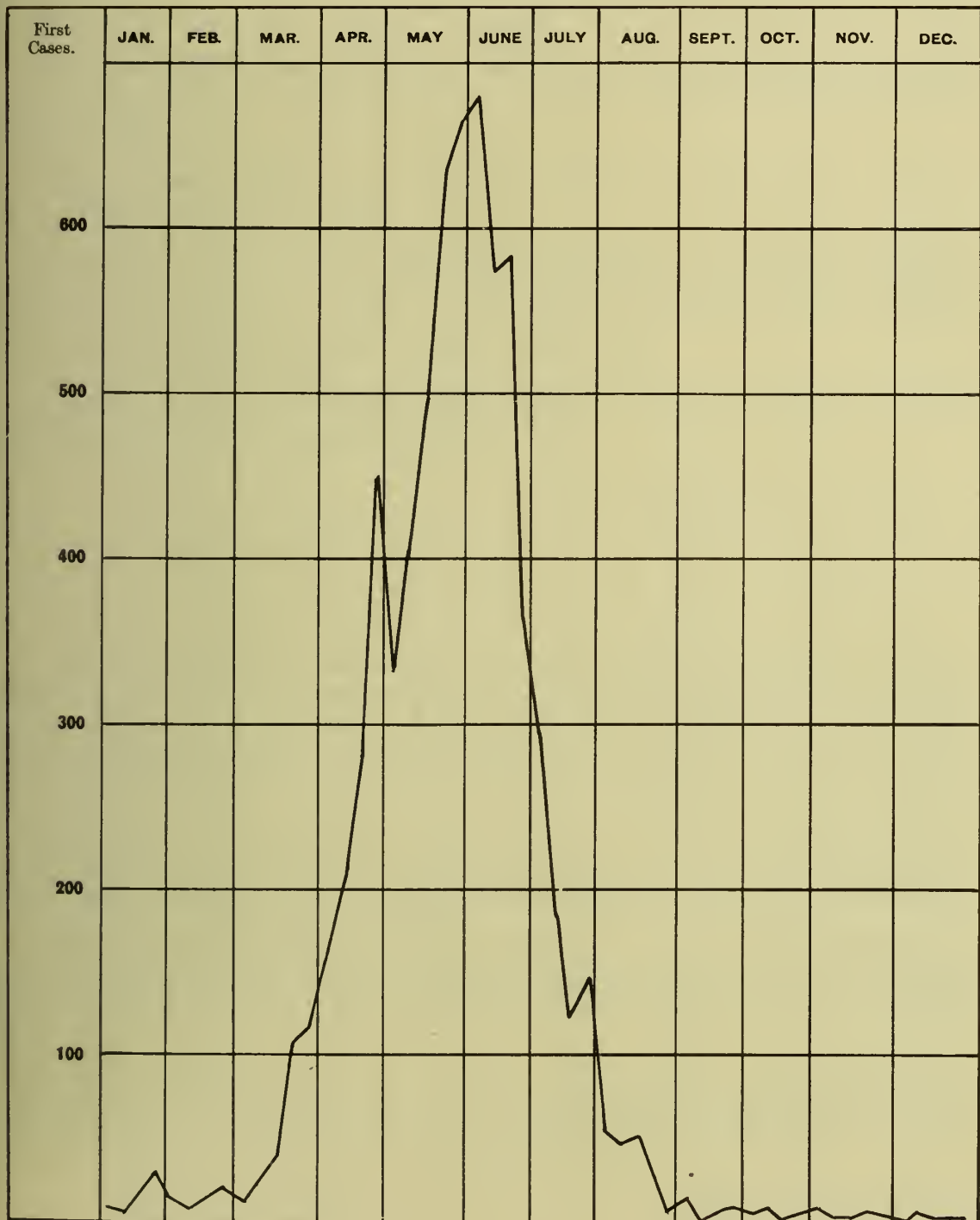
In regard to the age incidence the following Table shows that the majority of the cases occurred in children under the age of five years.

Age Periods.	Under 1 year.	-5.	-10	-15.	15 years and over.	Total.
Cases	304	3,556	3,011	158	153	7,182

In an effort to control the spread of the disease, a trained nurse was engaged early in the epidemic to visit the more serious cases. In a few days, however, it was recognised

NOTIFICATIONS OF MEASLES 1930.

(Number of "First Cases" notified weekly.)



that it was impossible for her to overtake all the patients requiring attention. Two nurses were therefore temporarily transferred from the tuberculosis staff to help in the work of home treatment.

Where the home conditions were not satisfactory, or where serious complications had arisen during the progress of the disease, removal to hospital was undertaken.

One of the greatest drawbacks to any attempt to check the spread of measles is the indifference shown by parents, many of whom still persist in regarding the disease as trivial and one which must be contracted by all children.

In an effort to overcome this mistaken idea, a pamphlet was circulated pointing out the serious nature of the disease and giving simple directions to parents for dealing with children showing early symptoms of measles.

The deaths certified during the year as due to measles numbered 106, and of these 94 were complicated with pneumonia. Only four deaths occurred in persons over five years of age.

Whooping Cough.—There were 1,638 cases of whooping cough notified during the year, as compared with 863 in 1929.

An increase in the number of notifications was noticed in the month of January, when 122 cases were reported. The intimations continued to increase, until the maximum number (314) was recorded in May. In the month of June 242 cases were reported, and then the notifications suddenly dropped to 80 in July.

Only the first case of whooping cough occurring in a family is notifiable, and the following Table shows the age distribution :—

Age Periods.	Under 1 year.	-5.	-10	-15.	15 years and over.	Total.
Cases . . .	235	914	454	17	18	1,638

It will be noted that the outbreak of whooping cough ran concurrently with the epidemic of measles. The same precautionary measures were adopted to curtail its spread, and skilled nursing attention was given to patients in their own homes where this was considered necessary. Hospital treatment was provided for complicated cases, and also for patients whose faulty home conditions were likely to prejudice their recovery.

The deaths from whooping cough numbered 72, and of these 50 were complicated with pneumonia, 5 with bronchitis, 6 with convulsions, and 7 with various other conditions. Only in 4 instances was whooping cough certified as the sole cause of death.

As already stated, measles is generally regarded as a trivial disease and this also applies to whooping cough. The two diseases are popularly looked upon as infectious illnesses which only assume importance when an epidemic interferes with school attendance.

Measles and whooping cough are, however, specially fatal to young children, and in 1930 accounted for fully 59 per cent. of the total deaths at all ages classified in the epidemic diseases group, which were distributed as under :—

Measles	106	
Whooping Cough	72	
	—	178
Diphtheria	71	
Scarlet Fever	7	
Enteric Fever	2	
Diarrhoea and Enteritis	41	
	—	121
Total	299	

Cases of measles and whooping cough removed to hospital were examined there by the Tuberculosis Officer. It is now a routine practice for those patients to be followed up on discharge by the tuberculosis staff. This step was taken in the hope that it may help to elucidate certain obscure conditions found in the young adolescent—conditions which simulate tuberculosis but are not really cases of the disease.

Erysipelas.—There were 339 cases of erysipelas notified during 1930, and of these 21 died. The case-mortality was 6·2 per cent.

Puerperal Fever.—During the year 81 cases of puerperal fever and 87 of puerperal pyrexia were notified to the Department. The notifications and deaths from puerperal conditions are fully dealt with in the Maternity and Child Welfare Section of this Report.

Ophthalmia Neonatorum.—Only 21 cases of ophthalmia neonatorum were reported in the course of the year. The measures adopted in regard to the treatment and supervision of these cases are specially referred to in the Maternity and Child Welfare Report on page 70, and also in the Report on Venereal Diseases on page 75.

Other Diseases.—The notifications of tuberculosis number 853, and full particulars regarding the cases will be found in the Tuberculosis Officer's Report.

In regard to the other notifiable diseases enumerated on page 16, the usual routine inquiries were made, but no special feature calling for comment emerged.

Admissions to Hospitals.—The appended Table gives particulars regarding the number of patients admitted to the various hospitals for the treatment of infectious diseases under the control of the Department.

	Pulmonary Tuberculosis.	Other Tuberculosis.	Other Diseases.	Total.
Colinton Mains Hospital .	430	52	3,787	4,269
Royal Victoria Hospital .	165	...	...	165
Portobello Hospital . .	...	...	8	8
Polton Farm Colony . .	16	...	...	16
Total . .	611	52	3,795	4,458

The above figures include cases admitted to the institutions by arrangement with various other Local Authorities, and also a number of patients who had come to the City for treatment at the Royal Infirmary or other general hospitals and who were found to be suffering from an infectious disease contracted prior to arrival. All such cases were notified to the Medical Officer of Health concerned and while included in the hospital records are not dealt with in the statistics relating to the City.

In the Table on page 21 the notifications of the principal infectious diseases, together with the mortality, are tabulated according to Wards.

On page 22 the number of cases reported annually since 1887 are detailed along with the deaths and death-rates for the various diseases.

The proportion of removals to hospital in relation to the notifications of certain specified forms of infectious disease since 1890 is shown on the Table on page 23.

In the Table on page 24 the notifications are classified according to the size of the house in which the infected persons resided. It is interesting to note that 32·7 per cent. of the scarlet fever cases and 47·5 per cent. of the diphtheria cases were reported from houses of one and two apartments.

No.	Ward.	Smallpox.		Typhus Fever.		Enteric Fever.		Puertal Fever.		Diphtheria.		Scarlet Fever.		Erysipelas.		Cerebro-Spinal Fever.		Measles.		Whooping Cough.		Total.	
		Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.
1	Calton	...	...	...	...	3	1	50	5	66	1	10	1	...	...	...	...	4	7	129	19
2	Canongate	...	...	...	...	2	1	74	6	53	2	21	...	2	2	...	...	11	5	155	28
3	Newington	...	...	...	...	2	1	31	2	47	2	12	2	2	2	...	...	5	1	94	15
4	Morningside.	...	...	...	...	1	...	16	...	59	...	8	...	...	...	...	...	...	...	86	...
5	Merchiston	2	...	28	1	61	...	12	1	2	106	2	
6	Gorgie	...	...	...	...	4	1	150	8	59	1	18	...	1	1	2	2	1	2	235	15
7	Haymarket	...	...	...	1	...	...	16	2	45	1	5	...	...	...	...	...	5	...	69	10
8	St. Bernard's	...	...	...	1	...	...	23	1	70	1	16	...	...	...	...	...	3	2	110	7
9	Broughton	...	...	...	...	3	...	22	...	23	...	9	...	...	...	...	...	6	1	58	7
10	St. Stephen's	...	...	...	...	2	1	26	1	40	...	15	...	...	...	...	...	3	5	84	11
11	St. Andrew's	...	...	...	...	1	...	32	4	22	...	8	...	...	...	...	...	3	2	63	10
12	St. Giles	...	...	...	...	7	...	75	9	67	...	27	...	1	1	2	...	10	7	175	28
13	Dalry	...	...	...	...	3	2	59	4	73	...	9	...	1	1	3	2	7	3	152	19
14	George Square	...	...	...	...	...	...	48	1	80	1	16	...	...	...	...	...	11	1	148	15
15	St. Leonard's	...	...	...	...	4	3	75	4	62	1	23	...	2	2	4	...	14	3	168	30
16	Portobello	...	...	...	...	4	...	73	6	60	...	9	...	1	1	3	2	5	3	153	16
17	South Leith	...	...	...	...	2	...	70	5	71	...	24	...	3	2	4	4	3	2	171	22
18	North Leith	...	...	...	...	7	1	41	5	27	1	7	...	2	2	4	4	6	11	87	30
19	West Leith	...	...	...	...	4	...	50	...	46	...	18	...	...	...	3	3	2	5	122	10
20	Central Leith	...	...	...	...	3	...	21	3	15	...	14	...	...	...	2	2	1	3	55	9
21	Liberton	...	...	...	...	1	1	16	1	18	...	1	...	1	1	...	...	1	1	39	6
22	Colinton	...	...	...	...	2	1	12	2	21	...	2	...	...	...	...	...	...	...	39	4
23	Corstorphine and Cramond	...	...	...	1	...	...	17	...	80	...	6	...	1	...	...	...	...	...	104	1
	Military Quarters	...	...	...	...	...	...	3	...	16	...	...	...	...	...	1	...	5	2	20	8
	Institutions	...	...	...	...	23	4	74	1	97	...	49	...	1	1	10	6	...	...	265	12
	Total	...	...	35	2	81	*17	1,102	71	1,278	8	339	21	52	†37	106	...	72	2,887	334	
	Case- and Death-rates (per 1000 population) for year	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.77	.78
	Case- and Death-rates (per 1000 population) for year 1929	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.72	.56

The deaths in this Table represent those actually occurring among the cases notified although taking place after 31st December.

* Includes 4 Deaths transferred to other districts.

† Includes 4 Deaths transferred to other districts.

Table showing the number of Notifications and Deaths, together with Death-rate per cent. of Cases of each Disease, during forty-four years, 1887-1930.

Year.	Smallpox.			Typhus Fever.			Enteric Fever.			Puerperal Fever.			Diphtheria, Mem- branous Group.			Scarlet Fever.			Erysipelas.			Cerebro-Spinal Fever.		
	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.	Cases.	Deaths.	Per- centage of Deaths to Cases.
1887	...	...	...	38	11	28.9	332	38	11.4	...	...	...	256	57	22.2	2,587	145	5.5	...	...	...	...	...	...
1888	1	...	...	23	5	21.7	245	27	11.0	...	...	...	245	65	26.5	618	20	3.2	...	...	...	...	...	...
1889	...	...	...	46	9	19.5	320	32	10.0	...	...	...	354	98	27.1	1,255	29	2.3	...	...	...	...	...	...
1890	...	...	...	7	1	14.3	500	44	8.8	...	...	...	361	85	23.5	1,197	46	4.0	...	...	...	...	...	...
1891	...	...	...	1	...	...	445	42	9.4	...	...	...	207	48	23.1	979	49	5.0	...	...	...	...	...	...
1892	8	...	...	18	3	16.6	238	28	11.7	...	...	...	203	42	20.6	1,856	69	3.7	...	...	...	...	...	...
1893	51	1	1.9	6	1	16.6	274	36	13.1	...	...	...	251	62	24.7	1,629	49	3.0	...	...	...	...	...	...
1894	537	56	10.4	3	1	33.3	310	38	12.2	...	...	...	362	86	23.7	1,821	65	3.5	...	...	...	...	...	...
1895	109	16	14.6	...	...	...	417	54	12.9	...	...	...	314	65	20.7	2,832	65	2.2	...	...	...	...	...	...
1896	...	...	...	10	3	30.0	328	36	10.9	...	...	...	251	52	20.7	2,185	48	2.1	...	...	...	...	...	...
1897	...	...	...	3	1	33.3	254	24	9.4	...	...	...	214	44	20.5	2,597	93	3.5	...	...	...	...	...	...
1898	...	...	...	79	9	11.4	241	27	11.2	...	...	...	269	38	14.1	2,387	72	3.0	...	...	...	...	...	...
1899	...	...	...	12	3	25.0	289	39	13.4	...	...	...	279	28	10.0	1,185	50	4.2	...	...	...	...	...	...
1900	5	...	...	35	3	8.5	249	25	10.0	...	...	...	483	52	10.0	991	27	2.7	...	...	...	...	...	...
1901	6	1	16.6	14	2	14.3	215	30	13.9	...	...	...	542	58	10.7	892	26	2.9	...	...	...	...	...	...
1902	7	...	...	10	1	10.0	192	27	14.0	...	...	...	408	32	7.8	812	30	3.6	...	...	...	...	...	...
1903	5	1	20.0	1	...	...	237	22	9.2	...	...	...	575	59	10.2	1,415	53	3.7	...	...	...	...	...	...
1904	168	15	8.9	6	...	...	196	22	11.2	...	...	...	752	63	8.3	1,070	31	2.8	...	...	...	...	...	...
1905	2	...	...	1	1	100.0	210	20	9.5	...	...	...	674	61	9.0	832	15	1.8	...	...	...	...	...	...
1906	...	...	...	...	...	...	144	11	7.6	...	...	...	667	48	7.1	987	34	3.4	...	...	...	...	...	...
1907	...	...	...	...	...	...	103	11	10.6	...	...	...	635	32	5.0	1,110	24	2.1	...	...	...	...	...	...
1908	20	...	...	...	...	...	68	6	8.8	...	...	...	389	16	4.1	1,993	32	1.6	...	...	...	...	...	...
*1909	2	...	...	...	...	...	39	5	12.8	...	...	...	423	38	8.9	1,522	50	3.2	...	...	...	...	...	...
1910	...	...	...	...	...	...	43	6	13.9	...	...	...	511	60	11.7	1,512	42	2.7	...	...	...	...	...	...
1911	...	...	...	...	...	...	31	3	9.7	...	...	...	605	49	8.0	1,075	24	2.2	...	...	...	...	...	...
1912	...	...	...	...	...	...	29	4	13.7	...	...	...	426	29	6.8	893	10	1.1	...	...	...	...	...	...
1913	...	...	...	...	...	...	45	10	22.2	...	...	...	448	35	7.8	1,675	43	2.5	...	...	...	...	...	...
1914	...	...	...	...	...	...	63	12	19.0	...	...	...	902	96	10.6	2,270	36	1.5	...	...	...	...	...	...
1915	...	...	...	...	...	...	21	3	14.3	...	...	...	900	107	11.8	1,748	58	3.3	...	...	...	...	...	...
1916	...	...	...	...	...	...	30	2	6.6	...	...	...	823	82	9.9	1,411	31	2.1	...	...	...	...	...	...
1917	...	...	...	...	...	...	6	2	33.3	...	...	...	584	65	11.1	748	16	2.1	...	...	...	...	...	...
1918	...	...	...	...	...	...	14	1	7.1	...	...	...	627	60	9.5	852	26	3.0	...	...	...	...	...	...
1919	...	...	...	...	...	...	6	...	...	...	...	...	734	79	10.7	1,459	39	2.6	...	...	...	...	...	...
1920	9	...	...	...	...	...	12	2	16.6	...	...	...	1014	63	6.2	1,420	14	0.9	...	...	...	...	...	...
†1921	...	...	...	...	...	...	9	...	...	...	...	...	991	75	7.5	2,163	42	1.9	...	...	...	...	...	...
1922	...	...	...	...	...	...	16	4	25.0	...	...	...	800	57	7.1	1,702	32	1.8	...	...	...	...	...	...
1923	...	...	...	...	...	...	29	2	6.9	...	...	...	770	69	8.9	1,897	93	4.9	...	...	...	...	...	...
1924	...	...	...	...	...	...	27	1	3.7	...	...	...	720	73	10.1	1,761	68	3.8	...	...	...	...	...	...
1925	...	...	...	...	...	...	30	1	3.3	...	...	...	870	82	9.4	2,351	62	2.6	...	...	...	...	...	...
1926	...	...	...	...	...	...	33	7	21.2	...	...	...	552	43	7.8	1,852	32	1.7	...	...	...	...	...	...
1927	...	...	...	...	...	...	78	2	2.6	...	...	...	599	44	7.3	1,848	19	1.0	...	...	...	...	...	...
1928	...	...	...	...	...	...	19	2	10.5	...	...	...	629	30	4.8	1,046	6	0.6	...	...	...	...	...	...
1930	...	...	...	...	...	...	33	2	6.1	...	...	...	1102	71	6.4	1,278	8	0.6	...	...	...	...	...	...

Year.	Smallpox.		Typhus Fever.		Enteric Fever.		Puerperal Fever.		Diphtheria, Mem- branous Group.		Scarlet Fever.		Erysipelas.	
	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.
1890	...	...	7	100-00	241	48-02			122	29-59	480	40-10		
1891	...	...	1	100-00	227	51-01			82	39-61	433	44-12		
1892	8	100-00	16	88-88	115	48-31			66	32-51	862	46-44		
1893	51	100-00	5	83-33	144	52-55			85	33-86	780	47-88		
1894	533	99-25	3	100-00	176	56-77			122	33-70	958	52-60		
1895	109	100-00	...	...	288	69-06			146	46-49	1519	53-63		
1896	...	...	10	100-00	233	71-03	Not N otified until 1902.		108	43-02	1381	63-20	Not N otified until 1902.	
1897	3	100-00	175	68-89			109	50-93	1658	63-84		
1898	7	100-00	78	98-73	143	51-03			111	41-26	1350	56-55		
1899	...	...	11	91-66	207	71-62			136	48-74	816	68-86		
1900	5	100-00	35	100-00	181	72-69			309	63-97	676	68-21		
1901	6	100-00	14	100-00	166	76-85			364	67-15	601	67-37		
1902	7	100-00	10	100-00	153	79-68			297	72-79	605	74-50		
1903	5	100-00	...	...	214	90-29	5	19-23	429	74-60	1187	83-88	207	40-35
1904	168	100-00	6	100-00	174	88-77	...	...	579	76-99	942	88-03	154	35-48
1905	2	100-00	1	100-00	179	85-23	1	7-14	581	86-20	740	88-82	136	38-52
1906	...	...	...	...	132	91-66	4	36-36	589	88-30	880	89-15	126	43-29
1907	...	...	1	100-00	91	88-34	7	63-63	546	85-98	1026	92-43	146	43-32
1908	17	85-00	...	...	61	89-70	12	63-15	338	86-88	1882	94-43	152	50-66
1909	2	100-00	...	...	35	90-00	9	69-23	371	87-70	1442	94-74	133	51-15
1910	...	...	...	...	39	90-69	14	60-86	476	93-15	1423	94-11	108	52-17
1911	...	...	...	...	29	93-55	11	57-89	556	91-90	1007	93-67	91	43-54
1912	...	...	...	...	27	93-10	8	53-33	396	92-95	848	94-96	131	54-35
1913	...	...	...	...	41	91-11	4	50-00	416	92-85	1612	96-23	132	55-23
1914	...	...	...	...	56	88-88	8	44-44	856	94-90	2206	97-18	108	48-43
1915	...	...	...	...	19	90-47	12	70-59	883	98-11	1659	94-90	146	52-50
1916	...	...	...	...	28	93-33	8	50-00	797	96-84	1383	98-01	144	51-42
1917	...	...	...	...	5	83-33	10	52-63	567	97-08	727	97-19	57	33-33
1918	...	...	...	...	11	78-57	11	50-00	606	96-65	841	98-70	74	46-25
1919	...	...	...	...	6	100-00	6	60-00	716	97-54	1435	98-35	69	54-76
1920	9	100-00	...	...	10	83-33	7	36-84	981	96-74	1382	97-32	75	42-37
†1921	...	...	...	...	13	50-00	13	50-00	953	96-16	2103	97-22	152	55-27
1922	...	...	...	...	6	66-66	17	47-22	767	95-87	1611	94-65	163	44-90
1923	...	...	...	...	15	93-75	9	52-94	741	96-23	1780	94-15	117	44-48
1924	...	...	...	...	27	93-10	19	57-57	699	97-08	1644	93-35	138	53-69
1925	...	...	...	...	22	81-48	25	62-50	845	97-12	1944	82-68	84	41-79
1926	...	...	...	...	27	90-00	16	59-26	524	94-92	1534	82-83	87	32-22
1927	...	...	...	...	26	78-88	27	67-50	578	96-49	1593	86-20	77	31-95
1928	...	...	...	...	62	79-48	45	71-42	602	95-70	849	81-16	114	47-50
1929	...	...	...	...	16	84-21	52	67-53	1145	97-77	970	84-05	111	39-22
1930	...	...	...	...	70	92-10	106	80-91	1086	98-56	1066	83-41	156	46-15
	...	...	...	...	33	94-28	74	91-35					174	51-32

† City Boundaries extended to include Leith and Suburban area.

Table showing the Notifications of Infectious Diseases, classified according to size of house in which the infected persons resided.

DISEASE.	1 Apartment.		2 Apartments.		3 Apartments.		4 Apartments.		5 Apartments.		Over 5 Apartments.		Institutions and Military Quarters.		Total Cases.
	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	
Diphtheria	93	8.4	431	39.1	297	27.0	87	7.9	34	3.1	83	7.5	77	7.0	1,102
Erysipelas	20	5.9	114	33.6	69	20.3	39	11.5	22	6.5	26	7.7	49	14.5	339
Scarlet Fever	68	5.3	350	27.4	302	23.6	150	11.7	55	4.3	240	18.8	113	8.8	1,278
Typhoid Fever	3	8.6	4	11.4	3	8.6	5	14.3	...	...	8	22.8	12	34.3	35
Puerperal Fever and Puerperal Pyrexia	5	3.0	83	49.4	32	19.0	11	6.5	5	3.0	3	1.8	29	17.2	168
Cerebro-spinal Meningitis	4	7.7	24	46.1	9	17.3	3	5.8	...	...	1	1.9	11	21.1	52
Totals	193	6.5	1006	33.8	712	23.9	295	9.9	116	3.9	361	12.1	291	9.8	2,974

TUBERCULOSIS.

REPORT BY TUBERCULOSIS OFFICER.

I have the honour to submit the Annual Report of the Tuberculosis Department for the year 1930.

Since assuming the responsibility of this Department in September no great changes have been made in the methods and procedure hitherto followed by my predecessor.

It is very gratifying to have to record a further fall in the death-rate from tuberculosis—thus marking the lowest mortality figure, for this disease, ever attained in the City. This, no doubt, is the outcome of several factors, chief amongst which are the improved housing conditions, a better understanding of the fundamental laws of hygiene and a more enlightened knowledge of the means by which the disease is spread.

A study of the Table on page 33 shows the decline in the mortality from pulmonary and other forms of tuberculosis which has taken place during the last thirty-one years.

It is becoming increasingly recognised that tuberculosis is primarily a disease of infancy and childhood—it is at this period of life that infection takes place in the vast majority of cases. Success in its control and eradication is largely concerned with the close and continued supervision of the young; and especially of those of tender years who are in immediate and continued contact with an open case of tuberculous disease. Concerning tuberculosis it can be truly said “the child is father of the man” for the infected child of to-day is the consumptive of to-morrow.

At the Royal Victoria Dispensary special attention is being given to this important aspect of preventive medicine and contacts from known infected homes, are being subject to careful control and radiographic investigation so that manifestations of infection may be early recognised and adequately supervised—such supervision, to be successful, may entail the examination of the child at intervals over a period of years.

Since the last report was submitted, a new and powerful X-ray outfit of the most modern and approved type has been installed in the Royal Victoria Dispensary, replacing the original installation which had become obsolete. The far reaching benefits conferred by this latest acquisition can not be over-estimated. No case of tuberculosis of the lungs has been fully investigated which has not been subjected to radiosopic and radiographic examination, and the clinician who attempts the artificial pneumothorax treatment of lung tubercle without enlisting the aid which X-ray alone can supply, must inevitably meet disaster sooner or later. In certain types of tuberculous disease of the lungs—especially in infants and young children—the condition can only be detected by X-ray investigation as the disease fails to furnish evidence of its presence by the usual methods of examination.

The permanent improvement manifested in the large majority of the cases treated at the Royal Victoria Hospital is an encouraging feature in the management of the early type of case. A proportion of these cases is composed of young children of school age whose treatment is combined, in the absence of contra-indications, with their attendance at the open-air school at that Institution.

The multiplicity of remedies which have from time to time been advocated for the treatment of tuberculosis is sufficient evidence of their comparative worthlessness, but our unremitting attention is steadily devoted to the therapeutic side of the tuberculosis problem. At the moment trial is being made, in suitably selected cases, of several recently suggested remedies. One of the most hopeful methods of treatment in pulmonary tuberculosis so far devised is that of artificial pneumothorax, which form of therapy has been in use in the Municipal Tuberculosis Hospitals for some eleven years. The sphere of its applicability has been widened recently in accordance with the increased

knowledge of its efficacy in the treatment of the various forms of lung tubercle. The application of surgery to the treatment of phthisis is of recent origin, but in a limited number of cases of tuberculosis of the lung great improvement can be effected as a result of purely surgical means, and in this connection a close association has been established with a member of the surgical staff of the Edinburgh Royal Infirmary. Already a few patients who have failed to respond to ordinary conservative methods of treatment in hospital have benefited considerably as a result of surgical intervention, and it is hoped to explore further, in suitable cases, this promising line of treatment.

The work at the Tuberculosis Dispensaries continues on the same lines as formerly, and every encouragement is given to the medical practitioners to make full use of the services which are offered for the investigation of their cases.

The statistics relative to the notifications and deaths and the work undertaken at the various tuberculosis institutions will be found in the following pages.

My best thanks are due to Dr. Guy, my predecessor, for his ever ready and willing assistance and valuable advice, and I have also to offer my sincere thanks to the Assistant Medical Officers and other members of the Tuberculosis Staff for their loyal and continued support.

I have the honour to be, Sir,

Your obedient Servant,

H. C. ELDER,
M.B., Ch.B., M.R.C.P., D.P.H.,
Tuberculosis Officer.

PULMONARY TUBERCULOSIS.

Notifications.—During the year 606 cases of the pulmonary form of tuberculosis were notified to the Department in terms of the Tuberculosis Regulations, 1912. Of this number 58 referred to non-residents who had come to the City for treatment, and particulars regarding these cases were transmitted to the district of permanent domicile for the attention of the Medical Officer of Health concerned. In the course of the year information was received by the Department regarding 10 Edinburgh citizens who had been notified to other Local Authorities.

After making the necessary adjustments for these outward and inward transfers, and also eliminating all duplicate notifications, the total number of cases allocated to the City was 558—323 males and 235 females.

The total is the lowest returned since the extension of the City boundaries in 1920, and maintains the progressive reduction that has taken place in the notification during the past six years.

The following Table shows the number of cases intimated annually since 1907, together with the incidence rate per 1,000 of the estimated population.

1907 . . .	651 or 2.0 per 1000.	1919 . . .	602 „ 1.9 per 1000.
1908 . . .	713 „ 2.2 „	1920 . . .	616 „ 1.9 „
1909 . . .	744 „ 2.3 „	*1921 . . .	817 „ 1.9 „
1910 . . .	763 „ 2.3 „	1922 . . .	762 „ 1.8 „
1911 . . .	1052 „ 3.3 „	1923 . . .	692 „ 1.6 „
1912 . . .	1255 „ 3.9 „	1924 . . .	799 „ 1.9 „
1913 . . .	1010 „ 3.1 „	1925 . . .	670 „ 1.6 „
1914 . . .	808 „ 2.4 „	1926 . . .	656 „ 1.5 „
1915 . . .	690 „ 2.1 „	1927 . . .	593 „ 1.4 „
1916 . . .	628 „ 1.9 „	1928 . . .	581 „ 1.4 „
1917 . . .	655 „ 2.0 „	1929 . . .	596 „ 1.4 „
1918 . . .	643 „ 2.0 „	1930 . . .	558 „ 1.3 „

* City Boundaries extended to include Leith and Suburban Area.

The distribution of the cases according to the district of the City in which the residence of the notified person is situated, and the incidence rate, based upon the population in each area, were as follows :—

Area.	Notifications.	Rate per 1000 of Population.
Edinburgh	395	1·3
Leith	119	1·5
Suburban	14	0·5
Institutions, etc.	30	...
Whole City	<u>558</u>	<u>1·3</u>

The sex and age distribution of the persons notified during the year is set out in the following Table. The males numbered 323 and the females 235, as compared with 323 and 273 respectively in 1929. Of the total cases, 32·3 per cent. referred to persons under the age of 25 years, while 67·7 per cent. were classified in the age groups over 25 years. The corresponding figures for the previous year were 33·4 per cent. and 66·6 per cent.

Sex.	Under 5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65-70.	70 and over.	Total.
Male	3	10	13	21	40	30	28	21	33	34	33	30	12	11	4	323
Female	4	9	5	40	35	29	34	14	16	15	7	4	9	5	9	235
Total	7	19	18	61	75	59	62	35	49	49	40	34	21	16	13	558

In the next Table the notifications are arranged according to the various Municipal Wards :—

	Notifications.	Rate per 1000.		Notifications.	Rate per 1000.
Calton	25	1·2	George Square	31	1·5
Canongate	31	1·5	St. Leonard's	39	2·1
Newington	15	·8	Portobello	34	1·3
Morningside	15	·7	South Leith	37	1·3
Merchiston	20	1·0	North Leith	32	1·7
Gorgie	28	1·1	West Leith	22	1·2
Haymarket	12	·7	Central Leith	28	2·1
St. Bernard's	22	1·2	Liberton	5	·5
Broughton	15	1·0	Colinton	3	·4
St. Stephen's	16	1·0	Corstorphine and Cramond	6	·5
St. Andrew's	20	1·9	Institutions (other than		
St. Giles	51	2·7	Sanatoria)	23	...
Dalry	21	1·0	Military Quarters	7	...

The incidence of pulmonary tuberculosis in the respective Wards varies considerably from year to year. It will be observed, however, that as is usually the case, the highest rates are returned for the districts where the overcrowding of houses and congestion of population is greatest.

In St. Giles and St. Leonard's Wards the incidence rate for the disease was 2·7 and 2·1 respectively. In these Wards, notwithstanding the recent Clearance Schemes, there are still far too many one- and two-roomed houses. In many instances these dwellings are of a very inferior type, and the surroundings generally leave little opportunity for leading a healthy and robust life.

As time goes on, however, the progressive policy that is being pursued by the Local Authority, in regard to Slum Clearances, will undoubtedly be reflected in improved health statistics for these and other overcrowded localities.

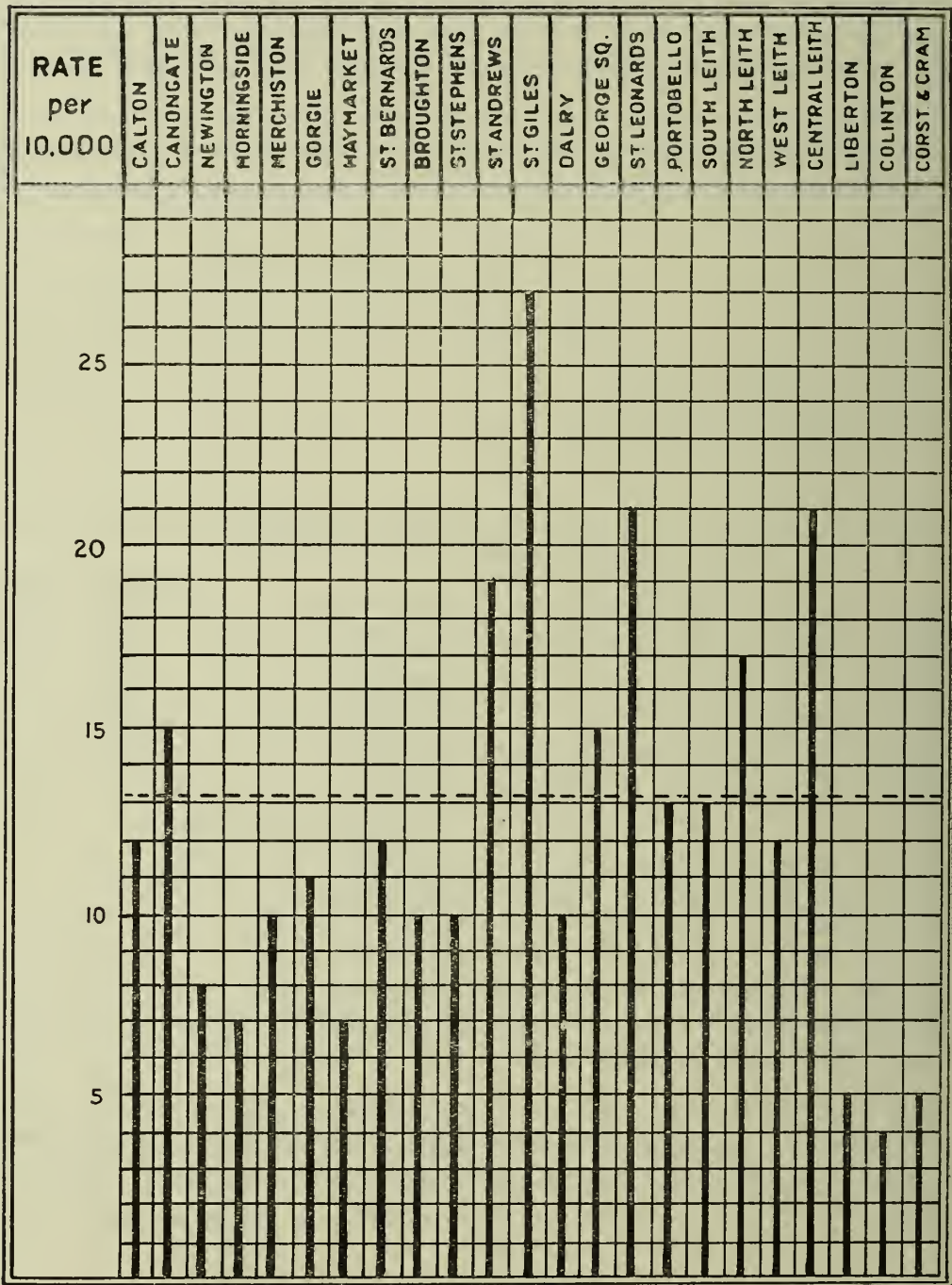
In the Leith Area the highest incidence rates for pulmonary tuberculosis were returned for the Central Ward (2·1) and for the North Ward (1·7). In certain parts of these Wards there is much overcrowding and the housing conditions have the same features as those existing in St. Giles and St. Leonards Wards.

The West Leith Ward, which includes the old fishing village of Newhaven, returned a rate of 1·2, while in the South Ward the rate was equal to 1·3 per 1,000 of the population.

The rates recorded for the suburban Wards are extremely satisfactory. The Liberton Ward, where there is a large mining population, returned the low incidence rate of ·5, while for the residential Ward of Corstorphine and Cramond the rate was also ·5 per 1,000 of the population.

In the following diagram the incidence of pulmonary tuberculosis in the various Wards can be readily compared with the rate for the whole City.

PULMONARY TUBERCULOSIS.
NOTIFICATIONS PER 10,000 OF POPULATION.



----- Notification Rate for City

The following Table gives particulars regarding the housing accommodation of the patients at the date of notification :—

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging-Houses.	Institu-tions.	Total.
42	196	154	123	16	27	558

Deaths.—The number of deaths from pulmonary tuberculosis allocated to the City after corrections had been made for outward and inward transfers was 333—174 males and 159 females. In the course of the year 22 inward transfer deaths were received and of these 13 occurred at Bangour Mental Hospital, West Lothian.

The death-rate for the year was equivalent to .78 per 1,000 of the population, and this represents the lowest rate for pulmonary tuberculosis that has been recorded for the City.

The annual death-rates for the last five years were as follows :—

Year	.	.	1926.	1927.	1928.	1929.	1930.
Death-rate	.	.	.84	.90	.81	.84	.78

The mortality experienced in the different areas of the City during 1930 was as under :—

Area.	Deaths.	Rate per 1000 of Population.
Edinburgh	237	.8
Leith	67	.9
Suburban	18	.6
Institutions and Military Quarters	11	...
Whole City	333	.8

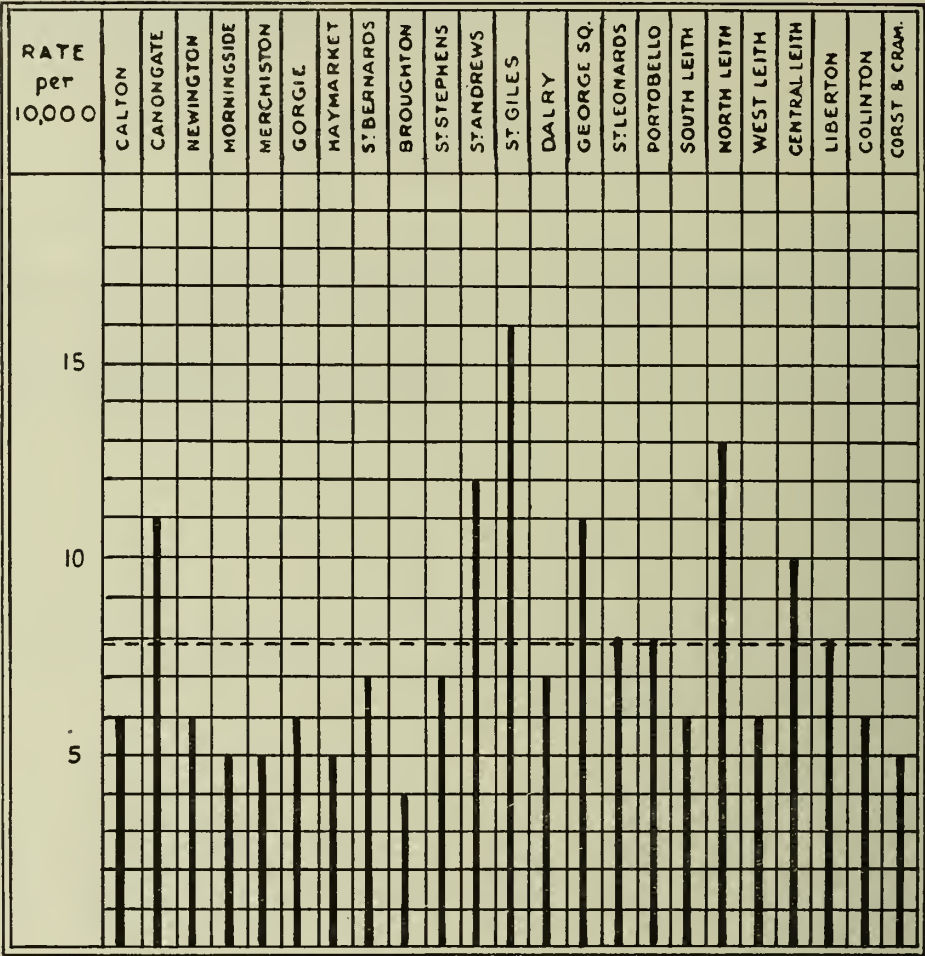
The accompanying Table shows the deaths in the various Wards tabulated according to the residence of the deceased persons :—

WARDS.	Number of Deaths.	Rate per 1000.	Sex.		Age-periods.							
			Male.	Female.	Under 15 years.	15 and under 20 years.	20 and under 25 years.	25 and under 35 years.	35 and under 45 years.	45 and under 55 years.	55 and under 65 years.	65 years and upwards.
Alton	13	.6	7	6	...	...	1	2	4	4	2	...
Arnongate	22	1.1	14	8	1	2	4	5	4	1	5	...
Bewington	12	.6	4	8	2	1	2	2	...	2	1	2
Borningside	11	.5	8	3	...	...	1	2	3	1	2	2
Borchiston	9	.5	3	6	...	...	...	2	1	2	2	2
Borgie	16	.6	9	7	1	...	...	7	1	1	5	1
Braymarket	9	.5	6	3	1	...	2	1	2	2	1	...
C. Bernard's	13	.7	5	8	1	1	2	3	1	3	2	...
Croughton	6	.4	3	3	...	1	1	...	1	2	1	...
D. Stephen's	11	.7	5	6	1	...	1	4	1	2	1	1
E. Andrew's	13	1.2	10	3	...	...	...	1	7	...	3	2
F. Giles	29	1.6	19	10	4	1	4	1	5	6	6	2
G. Alry	15	.7	6	9	...	...	1	5	4	2	3	...
H. George Square	23	1.1	18	5	1	...	5	2	3	9	2	1
I. Leonard's	15	.8	5	10	1	3	2	...	4	4	1	...
J. Portobello	20	.8	10	10	...	...	4	5	6	2	...	3
K. South Leith	18	.6	7	11	1	1	2	8	1	4	1	...
L. North Leith	24	1.3	14	10	1	1	3	6	4	6	2	1
M. West Leith	11	.6	7	4	...	1	2	4	3	1	...	...
N. Central Leith	14	1.0	8	6	...	2	4	5	...	1	2	...
O. Liberton	8	.8	1	7	...	3	2	1	1	1	...	...
P. Polinton	4	.6	1	3	...	...	3	...	1	...	...	...
Q. Pristorphine and Cramond	6	.5	1	5	...	...	1	...	2	2	1	...
R. Institutions (other than Sanatoria)	10	...	3	7	...	...	2	...	1	4	2	1
S. Military Quarters	1	...	...	1	...	...	...	1	...	...	...	...
Totals	333	.8	174	159	15	17	49	67	60	62	45	18
Edinburgh Area	237	.8	132	105	13	9	30	42	47	43	37	16
Leith Area	67	.9	36	31	2	5	11	23	8	12	5	1
Suburban Area	18	.6	3	15	...	3	6	1	4	3	1	...
Institutions	10	...	3	7	...	...	2	...	1	4	2	1
Military Quarters	1	...	...	1	...	...	...	1	...	...	...	...

The following line Diagram shows in a graphic way the death-rates in each of the Municipal Wards.

PULMONARY TUBERCULOSIS.

DEATH-RATE PER 10,000 OF POPULATION.



----- Death Rate for City

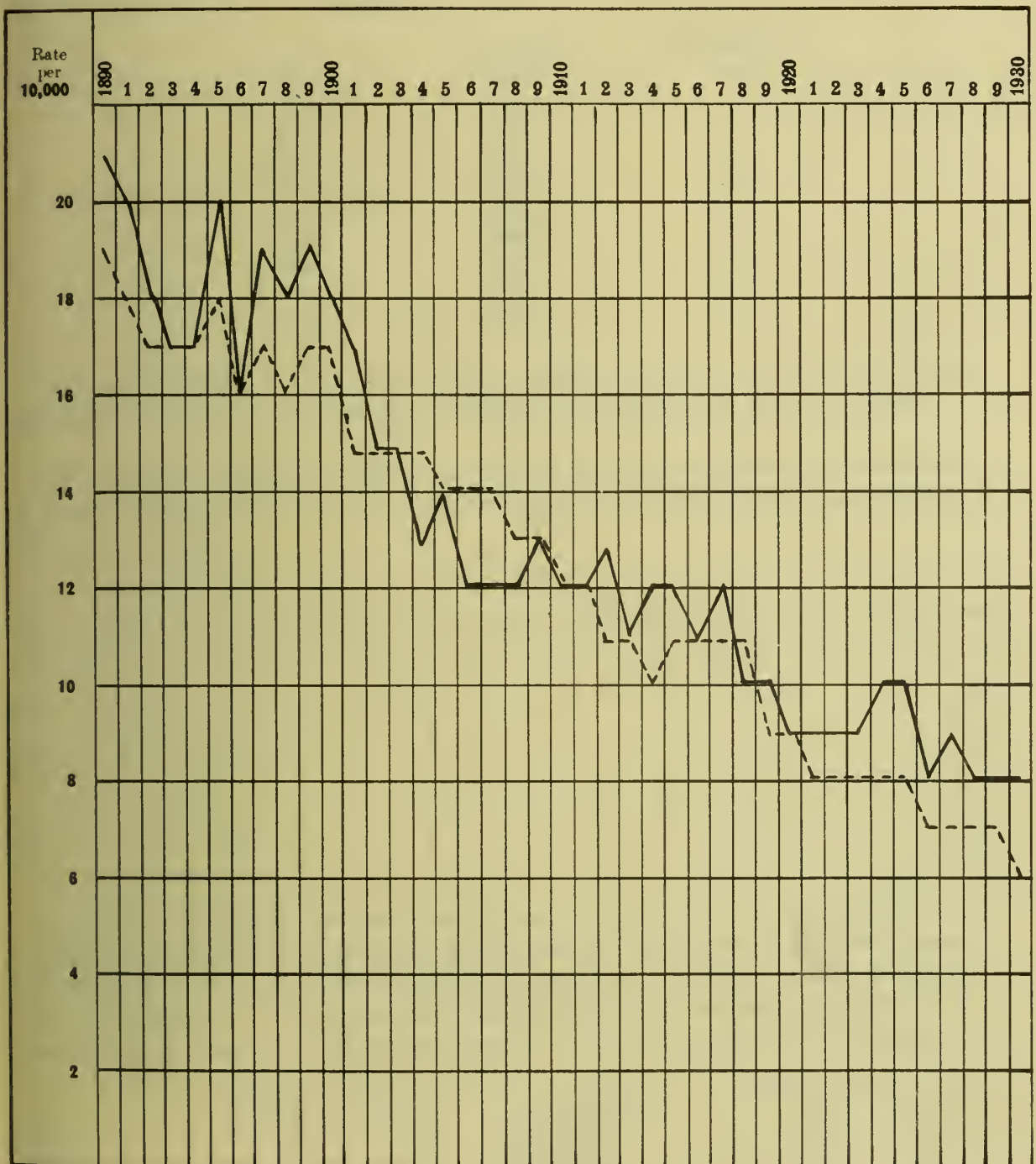
Deaths in relation to Notifications.—In the next Table the deaths from pulmonary tuberculosis are tabulated to show the lapse of time between notification and death :—

Year.	Within 1 month.	From 1 to 3 months.	From 3 to 6 months.	From 6 months to 1 year.	From 1 to 2 years.	Over 2 years and under 3.	Over 3 years and under 4.	From 4 years upwards.	Notified after Death.	Total.
1921	45	47	29	60	43	21	7	19	110	381
1922	38	37	43	56	53	23	13	25	79	367
1923	51	49	30	45	49	35	13	38	87	397
1924	49	48	49	51	67	34	21	49	56	424
1925	57	47	35	38	48	28	14	47	87	401
1926	49	42	36	38	42	27	11	42	69	356
1927	46	41	28	47	60	30	14	47	68	381
1928	56	41	23	26	47	26	14	51	61	345
1929	53	33	39	36	52	23	11	53	62	362
1930	56	34	26	29	53	14	14	39	68	333

It will be observed that 116 cases of pulmonary tuberculosis proved fatal within six months after notification, while 68 cases only came to the knowledge of the Department after death had actually occurred. The stage at which a case is reported has an important bearing on the future treatment of a patient, and it is to be regretted that in so many instances the disease should be well established before the Department is made aware of the case. If notification is to be of use in the control and treatment of the disease, it must be made without delay.

PULMONARY TUBERCULOSIS.

DEATH-RATE PER 10,000 OF POPULATION.



EDINBURGH —————

SCOTLAND - - - - -

NON-PULMONARY TUBERCULOSIS.

Notifications.—The number of new cases of non-pulmonary tuberculosis applicable to the City for the year, after making corrections for duplicates and transfers, was 295, as compared with 317 in 1929 and 347 in 1928.

In the accompanying Table the number of notifications received in each of the last ten years is given. The period covers the years subsequent to the amalgamation of the City with Leith and the Suburban Area. It will be noted that there has been an almost continuous decline in the number of cases, and that, between the years 1921 and 1930, the reduction was 242, or 45 per cent.

Year.	Notifications.	Rate per 1000 of Population.
1921	537	1·3
1922	485	1·1
1923	482	1·1
1924	455	1·1
1925	498	1·2
1926	433	1·0
1927	359	·8
1928	347	·8
1929	317	·7
1930	295	·7

The age incidence of the persons notified, which is given in the following Table, shows that it is chiefly the younger members of the population that are affected.

Of the cases notified, 200 or 67·7 per cent. of the total, referred to persons under the age of twenty years, and of these no fewer than 81, or 40·5 per cent., were children under 5 years of age.

Sex.	Under 5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65-70.	70 and over.	Total.
Male . .	40	22	17	16	11	10	...	3	2	5	5	3	1	2	2	139
Female . .	41	30	16	18	12	7	7	5	2	4	1	2	1	5	5	156
Total . .	81	52	33	34	23	17	7	8	4	9	6	5	2	7	7	295

In the next Table the cases are arranged according to Wards. As no information is available regarding the age incidence in the various Wards it is not possible, in view of the high percentage of children notified, to make any accurate or useful deduction as to the prevalence of non-pulmonary tuberculosis in any particular district. It is hoped, however, that the necessary data may be obtainable from the 1931 census.

	Notifications.	Rate per 1000.		Notifications.	Rate per 1000
Calton	16	·8	George Square	22	1·1
Canongate	20	1·0	St. Leonard's	17	·9
Newington	14	·7	Portobello	20	·8
Morningside	10	·5	South Leith	16	·6
Merchiston	12	·6	North Leith	11	·6
Gorgie	18	·7	West Leith	8	·4
Haymarket	13	·8	Central Leith	8	·6
St. Bernard's	6	·3	Liberton	7	·7
Broughton	5	·3	Colinton	3	·4
St. Stephen's	4	·2	Corstorphine and Cramond	5	·4
St. Andrew's	12	1·2	Institutions (other than		
St. Giles	26	1·4	Sanatoria)	6	...
Dalry	15	·7	Military Quarters	1	...

Edinburgh, 230=·7 ; Leith, 43=·5 ; Suburban, 15=·5 ; Institutions, etc., ·7.

In the undernoted Table the notifications are tabulated to show the type of house occupied by the infected persons.

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging-Houses.	Institu-tions.	Total.
34	105	86	57	2	11	295

In the accompanying list the notifications are classified to show the part of the body affected by the disease :—

Glands	94	Hand	1
Abdomen	69	Rib	1
Meninges and Brain	45	Not specified	2
Lupus	9		— 17
Genito-Urinary	15		
Spine	20	Joints—	
General	6	Hip	9
	— 258	Shoulder	1
		Elbow	1
		Knee	2
			— 13
Bones (except Spine)—		Others	7
Jaw	2		—
Leg	2	Total	295
Foot	7		
Arm	2		

Deaths.—The deaths classified in the non-pulmonary group of tuberculous disease numbered 90, as compared with an annual average of 127 for the preceding five years.

In the following Table particulars are given regarding the ages at death and the organ or site affected by the disease :—

Cause of Death.	All Ages.			Age Periods.												
	Both Sexes.	Males.	Females	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85 and over.	
Tuberculous Meningitis	41	18	23	6	9	6	4	8	4	3	...	1	...	...	...
Tuberculosis of Intestines and Peritoneum	25	12	13	3	4	2	1	4	5	2	1	1	2	...	...
" " Spine	4	2	2	...	1	1	...	...	...	1	...	1	...	...	...
" " Joints . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" " Skin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" " Bones (except spine)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" " Lymphatic System	5	1	4	...	...	1	...	1	...	...	...	...	2	1	...
" " Genito-urinary System	3	1	2	...	1	...	...	...	...	...	1	...	1	...	...
Disseminated Tuberculosis, acute & chronic	12	3	9	...	6	...	...	4	1	...	...	...	1	...	...
Other Non-Pulmonary Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	90	37	53	9	21	10	5	17	10	6	2	3	6	1	...	

The accompanying death-rates relative to the incidence of tuberculosis in the eight large Scottish towns have been extracted from the Registrar-General's preliminary statement for 1930 :—

Town.	Death-rate per 1000.		Town.	Death-rate per 1000.	
	Pulmonary Tuberculosis.	All forms of Tuberculosis.		Pulmonary Tuberculosis.	All forms of Tuberculosis.
Glasgow	·80	1·14	Paisley	·75	1·12
Edinburgh	·78	·99	Greenock	·87	1·18
Dundee	·75	1·05	Motherwell & Wishaw	·38	·55
Aberdeen	·54	·76	Clydebank	·79	1·03

The next Table shows the number of deaths from tuberculosis which have occurred annually since 1900, together with the death-rates per 1,000 of the population :—

DEATHS FROM TUBERCULOSIS, 1900-1930.

YEAR.	Pulmonary Tuberculosis.				Other Tuberculous Disease.				All Tuberculosis.	
	Deaths.			Rate per 1000.	Deaths.			Rate per 1000.	Deaths.	Rate per 1000.
	Male.	Female.	Total.		Male.	Female.	Total.			
1900	302	246	548	1·8	141	129	270	·9	818	2·7
1901	284	241	525	1·7	148	129	277	·9	802	2·6
1902	262	215	477	1·5	120	95	215	·7	692	2·2
1903	244	223	467	1·5	114	117	231	·7	698	2·2
1904	223	185	408	1·3	121	125	246	·8	654	2·1
1905	232	206	438	1·4	109	93	202	·6	640	2·0
1906	193	180	373	1·2	108	110	218	·7	591	1·9
1907	203	192	395	1·2	123	100	223	·7	618	1·9
1908	197	198	395	1·2	123	92	215	·7	610	1·9
1909	251	177	428	1·3	90	103	193	·6	621	1·9
1910	223	166	389	1·2	82	83	165	·5	554	1·7
1911	211	181	392	1·2	101	92	193	·6	585	1·8
1912	226	180	406	1·3	93	87	180	·6	586	1·9
1913	186	178	364	1·1	84	91	175	·5	539	1·6
1914	213	166	379	1·2	89	101	190	·6	569	1·8
1915	193	179	372	1·2	92	69	161	·5	533	1·7
1916	198	158	356	1·1	81	82	163	·5	519	1·6
1917	201	190	391	1·2	100	84	184	·6	575	1·8
1918	141	180	321	1·0	74	89	163	·5	484	1·5
1919	161	159	320	1·0	70	82	152	·5	472	1·5
1920	161	125	286	·9	69	62	131	·4	417	1·3
*1921	187	194	381	·9	96	87	183	·4	564	1·3
1922	187	180	367	·9	72	93	165	·4	532	1·3
1923	214	183	397	·9	70	68	138	·3	535	1·2
1924	225	199	424	1·0	73	70	143	·3	567	1·3
1925	215	186	401	1·0	89	76	165	·4	566	1·4
1926	201	155	356	·8	60	66	126	·3	482	1·1
1927	193	188	381	·9	75	55	130	·3	511	1·2
1928	195	150	345	·8	46	57	103	·2	448	1·0
1929	198	164	362	·8	69	43	112	·3	474	1·1
1930	174	159	333	·8	37	53	90	·2	423	1·0

*City Boundaries extended to include Leith and Suburban Area.

INSTITUTIONAL ACCOMMODATION AND TREATMENT.

Residential treatment for tuberculosis patients is provided at Municipal Hospitals as follows :—

Royal Victoria Hospital, Pulmonary Tuberculosis	.	.	76 beds.
Polton Farm Colony	„	„	18 „
Colinton Mains Hospital	„	„	148 „
„ „ „ Non-pulmonary Tuberculosis	.	.	73 „
Total	.	.	<u>315 beds.</u>

Royal Victoria Hospital.—This Institution is primarily reserved for the treatment of patients in the early stages of pulmonary tuberculosis.

The admissions during the year numbered 165, as compared with 197 in 1929 and 211 in 1928. The reduction in the number of cases admitted is accounted for by the decline which is slowly but surely taking place in the notifications, and is a further indication that the disease is being successfully controlled.

No new method of treating the patients was introduced during the year. It is satisfactory to note, however, that of the patients discharged after a course of treatment, 82 had been considerably improved, while in another 29 instances the progress of the disease was arrested.

The following Table shows the number of patients dealt with during the year :—

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Men . .	36	67	70	2	31
Women . .	28	74	69	4	29
Children .	6	24	18	...	12
Totals .	70	165	157	6	72

Throughout the year 157 patients were discharged from hospital and 6 died. The discharges include a number of patients who were admitted for observation. It is only such cases as were definitely diagnosed as pulmonary tuberculosis that are summarised in the accompanying Tables.

Sex and age distribution of the discharged patients :—

	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Total.
Males	2	5	13	20	12	12	5	1	70
Females	1	6	14	35	10	4	...	...	70
Totals	3	11	27	55	22	16	5	1	140

In the next Table the cases are classified to show the stage of the disease on admission to hospital and the condition of the patients on completion of their treatment :—

	Stage of Disease on Admission.			Condition on Discharge.			Died.
	A	B	C	Disease Arrested.	Improved.	Not Improved.	
STAGE I.—							
Male . .	21	15	1	12	24	1	...
Female . .	8	17	2	8	15	3	1
Total . .	29	32	3	20	39	4	1
STAGE II.—							
Male . .	2	13	2	2	15	...	...
Female . .	5	14	2	5	13	3	...
Total . .	7	27	4	7	28	3	...
STAGE III.—							
Male . .	2	9	5	1	6	7	2
Female . .	3	9	10	1	9	9	3
Total . .	5	18	15	2	15	16	5
Totals . .	41	77	22	29	82	23	6

PRESENCE OR ABSENCE OF TUBERCLE BACILLI.

ON ADMISSION.

	T.B. Present.	T.B. Absent.
Stage I. . .	23	41
„ II. . .	23	15
„ III. . .	26	12
Totals	72	68

ON DISCHARGE.

	T.B. Present.	T.B. Absent.
	18	46
	20	18
	27	11
	65	75

The complications noted in patients were as under :—

Pleurisy	6	Tuberculous Arthritis	2
Laryngeal Tuberculosis	3	Abdominal Tuberculosis	1
Tuberculous Adenitis	2	Tuberculoma (pontine)	1

The average length of residence of the discharged patients was 135 days.

Colinton Mains Hospital.—At this hospital 148 beds are set apart for the treatment of pulmonary tuberculosis. A further 73 beds are reserved for the other forms of the disease, and reference to these cases will be found on page 36.

The majority of the pulmonary cases selected for admission are generally in an advanced stage. In a large percentage of the cases the disease is too well established to permit of permanent cure. In many instances, however, the patients pick up wonderfully, and 175 were discharged during the year with their condition much improved.

The following Table shows the number of patients suffering from the pulmonary form of the disease that passed through the hospital in the course of the year :—

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Men	70	254	164	74	86
Women	39	157	108	47	41
Children	1	19	14	2	4
Totals	110	430	286	123	131

During the year 286 patients were discharged and 123 died. Of these, 342 were finally classified as pulmonary tuberculosis, and the figures in the following Tables refer to these cases only.

Sex and age distribution of discharged patients :—

	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Total.
Males . . . . .	...	...	2	11	60	36	48	28	14	199
Females	2	1	3	22	54	30	18	8	5	143
Totals	2	1	5	33	114	66	66	36	19	342

In the next Table the patients are classified to show the stage of the disease on admission and their condition on discharge :—

	Stage of Disease on Admission.			Condition on Discharge.		Died.
	A	B	C	Improved.	Not Improved.	
STAGE I.—						
Male	7	13	3	19	2	2
Female	5	4	3	8	3	1
Total	12	17	6	27	5	3
STAGE II.—						
Male	1	43	16	34	11	15
Female . . . . .	...	23	5	21	3	4
Total	1	66	21	55	14	19
STAGE III.—						
Male	1	61	54	48	15	53
Female	1	32	70	45	19	39
Total	2	93	124	93	34	92
Totals	15	176	151	175	53	114

PRESENCE OR ABSENCE OF TUBERCLE BACILLI.

ON ADMISSION.			ON DISCHARGE.		
	T.B. Present.	T.B. Absent.		T.B. Present.	T.B. Absent.
Stage I. . .	12	23		13	22
„ II. . .	49	39		48	40
„ III. . .	186	33		183	36
Totals . .	247	95		244	98

The average length of residence of the discharged patients was 203 days.

During the year 52 cases of non-pulmonary tuberculosis were admitted to hospital for treatment. In addition to these new admissions, 66 patients were in residence at 1st January.

In the following Tables particulars are given regarding the patients passing through the hospital in the course of the year :—

PATIENTS ADMITTED AND DISCHARGED.

Sex.	At 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Males .	35	27	26	3	33
Females .	31	25	18	1	37

Sex and age distribution of patients admitted :—

Sex.	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Total.
Males . . .	5	9	1	3	5	1	...	1	2	27
Females . . .	2	4	2	6	4	4	1	...	2	25
Totals . . .	7	13	3	9	9	5	1	1	4	52

PARTS AFFECTED BY DISEASE IN PATIENTS ADMITTED.

Part Affected.	Males.	Females.	Part Affected.	Males.	Females.
Abdomen . . .	4	7	Leg, Foot . . .	...	6
Spine . . .	8	6	Elbow . . .	1	2
Glands . . .	1	...	Genito-Urinary . .	2	1
Hip . . .	7	2			
Knee . . .	4	1	Totals . . .	27	25

CONDITION OF PATIENTS ON DISCHARGE.

	Males.	Females.	Total.
Apparently Cured	11	4	15
Improved . . .	14	12	26
Not Improved . .	1	2	3
Totals . . .	26	18	44

PARTS AFFECTED BY DISEASE IN PATIENTS WHO DIED, WITH ULTIMATE CAUSE OF DEATH.

Part Affected.			Ultimate Cause of Death.
Males	Abdomen	1	—Tuberculosis of Spine, Cachexia.
	Hip	1	—Chronic Interstitial Nephritis.
	Multiple	1	—Abdominal Tuberculosis
Females	Abdomen	1	—Abdominal and Pulmonary Tuberculosis.

RESULTS WITH REGARD TO PATIENTS DISCHARGED OR DYING DURING THE YEAR.

Parts affected on Admission.	MALES.	Appa- rently Cured.	Improved.	Not Im- proved.	Died.	FEMALES.	Appa- rently Cured.	Improved.	Not Im- proved.	Died.	Total number of patients with parts affected.
Abdomen . .	3	2	...	...	1	5	2	1	1	1	8
Elbow . .	2	1	1	...	...	1	...	1	...	...	3
Foot . .	2	1	1	...	...	2	...	2	...	...	4
Glands . .	...	...	...	...	...	1	...	1	...	...	1
Hip . .	8	4	3	...	1	2	...	2	...	...	10
Knee . .	6	1	4	1	...	4	...	4	...	...	10
Spine . .	6	2	4	...	...	4	2	1	1	...	10
Multiple . .	2	...	1	...	1	...	...	...	...	...	2
Totals . .	29	11	14	1	3	19	4	12	2	1	48

Polton Farm Colony.—During the year 29 cases were treated at the Colony.

Both males and females are in residence, and the patients selected for admission have previously undergone a course of Sanatorium treatment at the Royal Victoria Hospital.

The Colony affords an opportunity for a period of occupational treatment, and in most cases the standard of health is materially improved.

A piggery and poultry farm are attached to the Colony. These undertakings are run by the patients under the supervision of an experienced manager.

The revenue from the sale of pigs, poultry, eggs, etc., for the year to 15th May 1930 was £1,993, 15s. 3d., while the gross expenditure for the upkeep of the Colony for the same period amounted to £3,113, 14s. 8d.

TUBERCULOSIS DISPENSARIES.

Two dispensaries for the diagnosis and treatment of tuberculosis are provided by the Corporation, and the work has been carried on unremittingly during the year.

The Royal Victoria Dispensary is conveniently situated for patients resident in Edinburgh and is open every afternoon from Monday to Friday, and also on Thursday evenings. The other Dispensary is at South Fort Street, Leith, and is open on two afternoons per week for consultation purposes, this being sufficient to meet the requirements of patients resident in the district.

The medical profession still continue to make full use of the facilities provided at the dispensaries for the diagnosis of difficult or early cases of the disease, and a great number of special consultations have been arranged during the year.

Co-operation with the Child Welfare and School Medical Departments has also been maintained, and as a result many delicate children were examined and treated.

The following Table shows the number of attendances at each dispensary during the year :—

	New Cases.		Old Cases.	
	Edinburgh.	Leith.	Edinburgh.	Leith.
Men	623	71	3204	528
Women	544	103	3241	733
Children	690	174	3045	437
Totals	<u>1857</u>	<u>348</u>	<u>9490</u>	<u>1698</u>

Home Visitation.—The visitation of patients requiring medical or nursing attention in their own homes is a special feature of dispensary work. During the year the doctors and nurses on the dispensary staff made 12,308 domiciliary visits to patients in all parts of the City and the number of visits in each month of the year is detailed below :—

	Insured.	Not Insured.	Total.		Insured.	Not Insured.	Total.
January . . .	561	576	1,137	August . . .	270	337	607
February . . .	581	592	1,173	September . . .	497	568	1,065
March . . .	522	477	999	October . . .	738	697	1,435
April . . .	459	347	806	November . . .	768	667	1,435
May . . .	300	288	588	December . . .	705	700	1,405
June . . .	404	372	776				
July . . .	430	452	882	Totals . . .	<u>6,235</u>	<u>6,073</u>	<u>12,308</u>

Artificial Sunlight Treatment.—During the year 240 patients—193 medical and 47 surgical—were treated at the Ultra Violet Ray Clinic conducted at the Royal Victoria Dispensary. The installation consists of four Arc Lamps and one Mercury Vapour Lamp, and a specially trained nurse is in charge of the clinic.

The period of treatment generally extends from one to six months and in all 11,468 exposures were made.

Extra Nourishment.—This form of domiciliary treatment is granted in cases where the Tuberculosis Officer is of opinion that there is a likelihood of the patient deriving benefit from a course of special food. The treatment consists of a daily supply of milk, eggs, and butter, and generally covers a period of two months. If improvement is noted when the case is reviewed, an extension of benefit is allowed.

The expenditure during the year in connection with this treatment was £186, 6s. 6d.

Drugs.—Drugs are supplied to patients attending the dispensaries free of charge.

In addition to this, 1,585 prescription forms were issued by medical practitioners to patients suffering from tuberculosis. The prescriptions are dispensed by chemists on the panel of the Burgh Insurance Committee. In order to secure uniformity of pricing, the prescription forms are sent to the Central Checking Bureau for Scotland previous to payment by the Corporation. The expenditure during the year for drugs supplied in this way was £171, 2s. 4d.

CITY HOSPITAL.

REPORT BY MEDICAL SUPERINTENDENT.

I have the honour to present the Annual Report of the City Hospital for the year 1930. During the year there were 4,269 patients admitted to the wards, of whom 482 were suffering from tuberculosis. The above total includes cases admitted from districts outside the City boundaries. The greatest number treated in hospital on any one day was 634. The average daily number under treatment was 535.

The year under review, as indicated by the high average daily number under treatment, was a busy one. For the second year in succession the number of cases admitted to the diphtheria pavilions, 1,484, was unusually high. The extent of the epidemic of measles that prevailed during the late spring and early summer months is reflected in the number of cases of this disease treated in hospital during the year, namely 852. This figure has been exceeded on only one occasion in the past twenty years.

Diphtheria
and Measles.

Direct laryngoscopy and treatment by suction has been employed as a routine procedure throughout the year with very promising results (See Diphtheria).

Laryngeal
Diphtheria.

One hundred and fifty-three patients, suspected to be suffering from puerperal infection were admitted to the Wards. This is the same figure as for the preceding year. Whilst the admission rate for this disease has increased tenfold during the past decade it would seem that the peak has now been reached and that we may anticipate some 150 cases annually.

Puerperal
Infection.

I regret to report the death of one nurse from miliary tuberculosis two years after entering the hospital service.

Health of
Staff.

Illness, other than infectious, resulted in loss of duty for varying periods of time in 120 nurses.

One nurse contracted erysipelas, one chickenpox, one measles, and four diphtheria.

The complete freedom of the staff from scarlet fever during the year under review is a striking testimony to the efficacy of the measures adopted to protect the nurses against infection with the streptococcus scarlatinæ.

Immuniza-
tion against
Diphtheria
and Scarlet
Fever.

Three Schick positive nurses contracted diphtheria, whilst one very mild infection occurred in a nurse who had apparently been successfully immunized. All the cases were mild and made a rapid recovery.

The evidence that accumulates each year serves to emphasise more strongly the value of the methods employed for the protection of the nursing staff against diphtheria and scarlet fever.

Owing to the negligible incidence of these infections in the hospital maids it is not in our opinion necessary to extend these methods to the domestic staff.

During the year 29 nurses completed their training. Of these, 26 went to various hospitals for general training, and 1 obtained a post as a staff nurse. Twenty-four nurses passed the State Examination.

Training
of Nurses.

Two hundred and fourteen students attended classes at the hospital. These were divided into six sections entailing 72 hours' instruction. Two courses were held for candidates for the Diploma in Public Health. These courses were attended by 27 graduates. Four meetings during the summer vacation were devoted to post-graduate instruction. Including lectures to the nursing staff, 220 hours were devoted to teaching during the course of the year.

Teaching.

Medical Staff.

Dr. Alexander James, our Consultant Physician, resigned in the Autumn. We miss not only his kindly personality, but also his helpful advice in obscure cases.

The work performed by Dr. W. T. Gardiner, our Otologist, has been invaluable. During the year he performed 8 mastoidectomies, and 139 operations for the removal of tonsils and adenoids. He solves not only the difficulty of curing the chronic diphtheria carrier, but also the problem of the "tubard."

Mr Frank Jardine, the Surgical Consultant, has been very helpful in surgical problems, and has carried out major operative procedures where required.

Dr. A. L. K. Rankine has been my right hand man. I cannot speak too highly of his work, clinical, administrative, and in the laboratory.

The Junior Assistant Medical Officers have performed their clinical duties in a conscientious and praiseworthy manner.

Laboratory.

The number of reports issued from the laboratory amounted to 9,909. Mr Craig, the Laboratory Assistant, has carried out his duties in a very satisfactory manner.

Nursing and
General Staff.

The Matron, Sisters and Nursing Staff deserve high praise for their devotion to the welfare of the patients, and for their loyal support.

The Steward, and the various officials responsible for the kitchen, laundry, and dispensary, have all maintained the efficiency of their respective departments at a high level.

I append the usual reports relating to the various infectious diseases treated in the hospital.

I have the honour to be, Sir,

Your obedient Servant,

W. T. BENSON,
M.D. (Ed.), B.Sc. (St. And.), D.P.H. (Camb.),
D.T.M. & H. (Lond.), F.R.C.P. (Ed.),
Medical Superintendent.

DIPHTHERIA.

Of 1,484 cases admitted to the diphtheria pavilions 1,083 were finally diagnosed as suffering from diphtheria.

The addition of 3 cases erroneously diagnosed as suffering from scarlet fever brings the diphtheria total to 1,086.

Of the remainder, 265 were "carriers," and 136 were found to be suffering from diseases other than diphtheria. Various forms of tonsillitis and other septic and ulcerative conditions of the throat and mouth accounted for 85 cases; 19 patients were found to be suffering from scarlet fever; naso-pharyngeal catarrh, laryngitis, bronchitis, or pneumonia, was present in 16; measles, mumps, syphilitic and tubercular ulceration of the fauces, and various other morbid conditions were noted in the remainder.

Twenty-four of the diphtheria cases were suffering from an intercurrent infection—scarlet fever in 15; measles in 7; and chickenpox in 2 patients.

There were 62 deaths ascribed to diphtheria. The mortality per cent. was 5.70. It is to be noted that the death-rate is based on cases of clinical diphtheria; carriers are excluded. Excluding laryngeal cases the death-rate was 4.2 per cent.

The mortality of 97 laryngeal cases was 21·6 per cent. Thirty-six laryngeal cases required operative interference. The operative death-rate was 47·2 per cent.

Intubation was performed in 19 cases of whom 6 died. (31·6 per cent.).

Tracheotomy was performed in 9 cases and of these 8 died.

Intubation followed by tracheotomy was performed in 8 cases—3 died.

The paralysis rate was 7·1 per cent., indicating a more severe type of disease than in the previous year (5·1 per cent.).

Serum rashes were noted in 105 cases, or 9·68 per cent. of the diphtheria patients treated.

Of the 62 deaths from diphtheria, 22 occurred within 48 hours of the admission of the patient to hospital. Forty-six deaths (74 per cent.) occurred in patients who first came under treatment on or after the fourth day of disease.

Table showing age and sex of diphtheria patients :—

Age-period in years	0-1 yrs.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50+ yrs.	Totals.
Recovered { Males .	6	22	34	39	44	188	57	12	18	10	1	3	434
Recovered { Females	8	17	29	41	51	215	92	35	65	22	11	4	590
Died { Males .	1	3	5	4	5	5	1	...	...	...	...	...	24
Died { Females	...	4	3	4	6	16	2	...	...	2	1	...	38
Totals .	15	46	71	88	106	424	152	47	83	34	13	7	1086

Hospital death-rate, 5·70 per cent.

The type of disease met with during the year under review, as indicated by the higher death-rate, and paralysis rate, was more severe than the preceding year. In early diagnosis and the immediate administration of antitoxin lies the secret of successful treatment of diphtheria. It is difficult to understand why the practitioner awaits bacteriological confirmation in the face of obvious and often severe clinical manifestations of the disease.

Severe toxæmia was a feature of the operative laryngeal cases which succumbed. In most cases extensive faucial and nasal lesions preceded the laryngeal involvement, and the patient succumbed from cardiac failure or broncho-pneumonia after the respiratory difficulty had been successfully surmounted.

Direct laryngoscopy has been extensively employed in the diagnosis of all doubtful cases showing laryngeal symptoms. Cultures were taken directly from the larynx. The method should be adopted as a routine for accurate diagnosis.

Suction treatment in suitable cases has been an unqualified success. The relief afforded to the patient might be described as dramatic in many cases. The timely removal of membrane from the larynx and trachea has undoubtedly saved the necessity of operative procedures in several patients.

A powerful electric suction pump is essential. In the Electro-Atmos we have found an ideal instrument for the purpose.

SCARLET FEVER.

During the year 1,122 cases were admitted to the wards notified as scarlet fever. The diagnosis was confirmed in 1,038 patients. The addition of 20 cases, 19 erroneously diagnosed as suffering from diphtheria and 1 from measles, brings the scarlet fever total to 1,058.

Various forms of tonsillitis, or erythema accounted for 45 of the 84 misdiagnosed cases. Of the remainder, 6 were suffering from measles; 3 from diphtheria; 4 from pneumonia; 3 from rubella; 2 from chickenpox; and 2 from pyelitis.

The admission rate for scarlet fever, whilst slightly higher than the two previous years, was still unusually low. The type of disease was mild.

There were 6 deaths. The case mortality was 0·56 per cent. No toxic cases were noted. The 5 septic cases all recovered. Of the 6 deaths, two occurred in children suffering from pneumonia in addition to scarlatina. Myocardial failure accounted for two deaths. One child developed nephritis and died from uræmia. The sixth death resulted from a combination of scarlet fever, severe diphtheria and acute mastoiditis.

The following are the principal complications which were noted :—

Rhinitis	.	.	.	.	146 cases, or 13·8 per cent.
Late Adenitis	.	.	.	.	97 „ 9·2 „
Otorrhœa	.	.	.	.	52 „ 4·9 „
Arthritis	.	.	.	.	38 „ 3·6 „
Nephritis	.	.	.	.	24 „ 2·3 „
Endocarditis	.	.	.	.	Nil.

Table showing age and sex of scarlet fever patients :—

Age-period in years	0-1 yr.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60+ yrs.	Totals.
Recovered { Males .	2	17	30	42	44	182	78	36	33	14	7	...	...	485
Recovered { Females .	4	17	28	37	38	199	103	59	48	22	11	1	...	567
Died { Males .	...	1	2	...	1	1	...	...	...	...	...	...	...	5
Died { Females .	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Totals .	6	35	60	79	83	382	181	95	81	36	19	1	...	1058

Hospital death-rate, 0·56 per cent.

There were 17 alleged “infecting cases” or 1·6 per cent. of the total number of scarlet fever convalescents discharged.

The 17 “infecting cases” were responsible for 17 “return cases.”

The return case-rate was 1·6 per cent.

Of the 17 alleged “infecting cases” 9 were “clean cases” whilst in hospital.

Antitoxic serum was administered to 26·5 per cent. of the cases in which the diagnosis was confirmed. /

In addition to the routine employment of the Schultz-Charlton and Dick tests as aids to diagnosis, cultures from the fauces were examined for the presence of hæmolytic streptococci in all doubtful cases. This procedure was found helpful.

Where convalescents are returned to other hospitals, or to institutions for children, we insist on at least two consecutive negative cultures for hæmolytic streptococci from throat and nose as a reasonable index of freedom from infection.

For various reasons we do not intend to adopt this measure as a routine in all convalescent scarlatina patients prior to discharge.

ENTERIC FEVER.

Of 46 cases admitted to the wards notified as enteric fever, 35 were found to be suffering from the disease.

The following diseases were noted in the group of 11 cases, either wrongly diagnosed as enteric fever, or sent in for observation:—pneumonia (3 cases), gastro-enteritis (2 cases), colitis (2 cases), bronchitis, influenza, streptococcal septicaemia, and puerperal septicaemia.

The infecting organism was the bacillus typhosus in 4 patients, and the bacillus paratyphosus B. in 31 cases.

All four typhoid cases recovered. One patient suffering from paratyphoid B fever died within forty-eight hours of admission to hospital from myocardial failure. She had suffered from exophthalmic goitre for several years and there were marked symptoms of hyperthyroidism on admission.

Table showing age and sex of enteric fever patients:—

Age-period in years . . .	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60+ yrs.	Totals.
Recovered { Males . . .	2	4	4	5	5	...	...	...	...	20
{ Females . . .	1	...	2	3	3	4	1	...	...	14
Died { Males . . .	...	...	...	...	...	...	...	...	...	...
{ Females . . .	...	...	...	...	...	1	...	...	...	1
Totals . . .	3	4	6	8	8	5	1	...	...	35

Hospital death-rate, 2·86 per cent.

ERYSIPELAS.

There were 229 cases admitted to the wards notified as erysipelas.

The diagnosis was confirmed in 174 patients.

Of the remaining 55 cases, cellulitis was present in 18, various forms of dermatitis in 14, eczema in 4, erythema in 4, herpes in 3, cavernous sinus thrombosis in 2, secondary syphilis in 2, and seborrhœa, nasal sepsis, injury, septicaemia, abscess, parotitis, anthrax, and bronchiectasis with gangrene of the lung, in 1 case each.

The case mortality rate was 8·0 per cent.

In 158 of the 174 cases the inflammation primarily affected the face.

Twenty-nine patients, or 16·6 per cent. of the total admissions had suffered from previous attacks.

In 17 patients, or 9·7 per cent. of the total cases, one or more relapses occurred whilst under treatment in hospital.

Table showing age and sex of erysipelas patients:—

Age-period in years . . .	0-4 yrs.	5-9 yrs.	10-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60-69 yrs.	70+ yrs.	Totals.
Recovered { Males . . .	5	3	1	5	1	12	15	14	1	57
{ Females . . .	3	3	9	17	18	9	22	19	3	103
Died { Males . . .	1	...	...	...	1	1	...	3	4	10
{ Females . . .	1	...	...	...	...	...	...	2	1	4
Totals . . .	10	6	10	22	20	22	37	38	9	174

Hospital death-rate, 8·0 per cent.

Scarlet fever antitoxic serum was extensively employed in the treatment of erysipelas. There can be no question that amelioration of constitutional symptoms follows the exhibition of this serum in many cases. There was no evidence that the spread of the inflammatory process was checked.

Dr. Davidson, one of my assistants, carried out an extensive trial of local and general ultra-violet light therapy. The results will be published in due course.

Extensive personal experience of vaccine therapy was published in *The Lancet*, 13th December 1930, p. 1286.

CEREBRO-SPINAL MENINGITIS.

Fifty-eight suspected cases of cerebro-spinal fever were admitted to hospital, of which 37 proved to be meningococcal. Six patients were suffering from pneumonia; 5 from tubercular meningitis; 3 from pneumococcal meningitis; and one each from streptococcal meningitis, pneumococcal peritonitis, cerebral abscess, acidosis, gastritis, meningism, and hydrocephalus.

In addition 2 cases of meningococcal meningitis were admitted notified as measles.

Twenty-six of the meningococcal cases died.

Excluding infants the death-rate was 45·8 per cent.

Table showing age and sex of patients suffering from cerebro-spinal meningitis:—

Age-period in years			Under 1 year.	1-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40+ years.	Totals.
Recovered	{Males		...	2	1	2	2	...	1	...	8
	{Females		...	3	1	...	1	...	...	...	5
Died	{Males		10	3	...	...	1	2	1	...	17
	{Females		3	1	...	...	...	1	...	2	7
Totals			13	9	2	2	4	3	2	2	37

Hospital death-rate, 70·27 per cent.

PUERPERAL INFECTION.

Of 153 cases notified as puerperal fever the diagnosis was confirmed in 137. Forty-five of these cases were admitted from districts outwith the City boundaries.

Twenty-five of the 137 cases died, a mortality rate of 18·2 per cent.

Seventy-four cases were multiparæ and 63 primiparæ.

There were 17 deaths (22·9 per cent.) among the multiparæ and 8 (12·7 per cent.) among the primiparæ.

The 16 cases in which the diagnosis was not confirmed were found to be suffering from one or other of the following conditions:—mastitis, constipation, primary pneumonia, pyelitis, cystitis, influenza, bronchitis, miliary tuberculosis, infective endocarditis.

Pyelitis or bacilluria was present in 39 cases (28·4 per cent.).

The following complications were noted:—pelvic cellulitis, peritonitis, phlebitis, cystitis, gangrene, pneumonia, pleurisy, empyema, pyæmia, meningitis, arthritis, and mental disorders.

Table showing age of puerperal infection patients :—

Age—Period in Years.	15-19 years.	20-29 years.	30-39 years.	40 + years.	Totals.
Recovered	16	66	28	2	112
Died	1	11	12	1	25
Totals	17	77	40	3	137

Hospital death-rate, 18·2 per cent.

Table showing day of disease on which 137 cases of puerperal infection were admitted to hospital :—

Day of Disease.	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th or later	?	Total.
Number of Cases	8	26	16	24	18	8	8	5	2	1	1	3	1	12	4	137

The average day of illness on which the patient first received treatment in hospital was the fifth.

Scarlet fever antitoxic serum was freely administered to septicæmic cases. The results obtained were disappointing.

PNEUMONIA.

There were 30 patients admitted to the wards notified as primary pneumonia, or influenza and pneumonia. In 24 cases the diagnosis of pneumonia was confirmed. There were 18 cases of acute primary pneumonia, 3 cases of influenza with broncho-pneumonia, and 3 cases of broncho-pneumonia.

Three deaths occurred.

The corrected diagnosis in 6 patients was as follows :—pleurisy in 2 cases ; chronic bronchitis ; ulcerative stomatitis ; tonsillitis ; and naso-pharyngeal catarrh in 1 case each.

Table showing age and sex of pneumonia patients :—

Age-period in years	0-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40-49 years.	50+ yrs.	Totals.
Recovered { Males	2	3	1	...	1	...	4	...	11
Recovered { Females	3	...	2	2	1	1	...	1	10
Died { Males	1	...	...	...	...	1	...	1	3
Died { Females . . . .	...	...	...	...	...	...	...	...	...
Totals	6	3	3	2	2	2	4	2	24

Hospital death-rate, 12·5 per cent.

WHOOPING COUGH.

One hundred and eighty-three patients were admitted to the wards notified as whooping cough. The diagnosis was confirmed in 169 cases. Bronchitis, broncho-pneumonia, measles, or enteritis, was present in one or other of the fourteen misdiagnosed cases.

Broncho-pneumonia was present as a complication in 53 cases on admission, 31 per cent. of the total.

The fatality rate, 23·0 per cent., whilst high, is unfortunately not uncommon in the type of case selected for hospital treatment.

Pneumonia was the cause of the fatal issue in 33 of the 40 patients who died. Tubercular meningitis, diphtheria, measles, and inanition accounted for the remaining deaths.

Table showing age and sex of whooping-cough patients :—

Age-period in years . . .		0-1 year.	1+ years.	2+ years.	3+ years.	4+ years.	5-9 years.	10 onwards.	Totals.
Recovered	{ Males . . .	10	12	14	15	4	7	1	63
	{ Females . . .	8	18	12	11	6	11	...	66
Died	{ Males . . .	3	8	4	2	2	...	...	19
	{ Females . . .	5	6	5	3	2	...	...	21
Totals . . .		26	44	35	31	14	18	1	169

Hospital death-rate, 23·0 per cent.

MEASLES.

The epidemic prevalence of measles during the year is reflected in the unusually large number of cases admitted to the wards, namely, 860. The diagnosis was confirmed in 804 patients. The corrected diagnosis in 56 cases was as follows :—pneumonia (19) ; erythema (12) ; naso-pharyngeal catarrh (8) ; whooping cough (4) ; seborrhœa, rubella, scabies (2 each) ; scarlet fever, chickenpox, cœliac disease, purpura hæmorrhagica (1 each) ; in 3 patients no clinical evidence of disease could be found.

There were 79 deaths. The case mortality was 9·2 per cent.

Broncho-pneumonia was the cause of death in 70 patients. Enteritis, diphtheria, and meningococcal meningitis, accounted for the fatal issue in other 6 cases.

In addition to the 804 patients admitted to the wards correctly diagnosed as measles, 48 additional cases of morbilli were admitted to the hospital notified as follows :—scarlet fever (17) ; whooping cough (16) ; diphtheria (13) ; paratyphoid B. fever (1) ; and meningococcal meningitis (1).

The following are the principal complications which were noted :—

Broncho-pneumonia . . .	188 cases, or 22·06 per cent.
Otitis Media	111 „ 13·02 „
Purulent Conjunctivitis . . .	85 „ 9·97 „
Enteritis	60 „ 7·04 „
Adenitis	27 „ 3·17 „
Laryngitis (ulcerative or diphtheritic)	15 „ 1·76 „
Keratitis	7 „ 0·82 „

Table showing age and sex of measles patients :—

Age-period in years . . .		0-1 yrs.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	Totals.
Recovered	{ Males . . .	19	69	69	68	45	81	21	14	14	3	403
	{ Females . . .	25	63	55	60	40	82	15	12	12	6	370
Died	{ Males . . .	7	20	5	4	2	4	...	...	...	...	42
	{ Females . . .	8	22	2	1	2	1	1	...	...	...	37
Totals . . .		59	174	131	133	89	168	37	26	26	9	852

Hospital death-rate, 9·27 per cent.

When we consider the type of case selected for treatment in hospital the mortality figure is fairly satisfactory.

A pleasing feature was the absence of severe eye complications. In only two children was there some impairment of sight on discharge from hospital.

CHICKENPOX.

The number of patients admitted to the wards notified as chickenpox was 50.

The diagnosis was confirmed in 47 cases. The corrected diagnosis in the other three cases was febrile catarrh, pneumococcal peritonitis, and seborrhœa corporis respectively.

No deaths occurred.

Table showing age and sex of chickenpox patients :—

Age-period in years	0-1 year.	1+ years.	2+ years.	3+ years.	4+ years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40+ yrs.	Totals.
Recovered { Males	1	1	2	3	2	15	...	1	1	...	1	27
Recovered { Females	...	...	4	3	...	6	2	1	2	1	1	20
Died { Males	...	...	...	...	...	...	...	...	...	...	...	...
Died { Females	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	1	6	6	2	21	2	2	3	1	2	47

OTHER DISEASES.

ANTHRAX.—One patient, suffering from cutaneous anthrax (forearm) made an excellent recovery. An adult male notified as erysipelas, was found to be suffering from a severe infection of the tissues of the neck with *B. anthracis*. This patient died within 36 hours of admission to hospital. Details of this case will be found in *The Lancet*, ccxx., 21st February 1931.

DYSENTERY.—Of 8 cases notified as dysentery, or sent in for observation, two were found to be suffering from the disease. One was infected with *B. dysenteriae* (Flexner) whilst the *entamoeba histolytica* was incriminated in the other patient. Both cases recovered. Of the six misdiagnosed cases, four were finally diagnosed as suffering from one or other of the following conditions : non-specific entero-colitis ; catarrhal jaundice ; *B. enteritidis* Gærtner infection.

EPIDEMIC ENCEPHALITIS—Four individuals alleged to be suffering from encephalitis lethargica were admitted to the wards. In no case was the diagnosis confirmed. The corrected diagnosis was as follows :—hysteria, cerebral hæmorrhage, meningo-encephalitis, and tubercular meningitis.

EPIDEMIC PAROTITIS.—Seventeen cases were admitted to hospital notified as mumps. The diagnosis was confirmed in 16 patients.

POLIOMYELITIS.—The diagnosis was confirmed in one of two cases alleged to be suffering from poliomyelitis. This patient recovered.

RUBELLA.—Five out of twelve patients admitted to the wards notified as rubella were found to be suffering from this disease. No complications were noted. All five cases recovered.

LABORATORY ANNUAL REPORT.

FROM 1st JANUARY TO 31st DECEMBER, 1930.

Nature of Specimen.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Total.
Cultures for B.													
diphtheriæ . . .	1009	726	660	666	342	423	355	329	327	629	731	825	7022
Urine	51	35	33	50	53	26	69	50	60	33	33	36	529
Sputum	92	21	97	92	67	80	63	92	61	72	131	69	937
Stools	5	3	6	8	10	8	32	15	23	10	14	7	141
C.S.F.	23	17	46	49	68	76	22	76	21	26	4	...	428
Widals	2	3	...	1	3	5	3	5	8	11	2	1	44
Blood Cultures .	13	18	14	15	18	10	17	11	26	25	35	38	240
Cultures for S.													
hæmolyticus . .	10	10	23	2	4	2	17	14	47	41	62	59	291
Uterine Cultures .	13	15	5	18	16	5	10	9	9	9	14	19	142
General Specimens .	14	13	11	16	9	11	14	2	4	12	11	18	135
Totals .	1232	861	895	917	590	646	602	603	586	868	1037	1072	9909

BACTERIOLOGICAL EXAMINATIONS.

Examinations carried out by the Bacteriology Department of the University,
from January to December 1930 :—

ROUTINE BACTERIOLOGICAL EXAMINATIONS.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Throat, nasal and aural swabs for Bacillus diphtheriae :—													
Total . . .	931	574	647	607	433	364	367	331	477	801	871	815	7218
Positive . . .	100	74	78	68	57	30	44	33	73	147	166	124	994
Negative . . .	831	500	569	539	376	334	323	298	404	654	705	691	6224
Throat swab for Bacillus diphtheriae Virulence Test :—													
Total . . .	...	...	...	...	...	...	...	...	1	...	...	...	1
Positive . . .	...	...	...	...	...	...	...	...	1	...	...	...	1
Negative . . .	...	...	...	...	...	...	...	...	0	...	...	...	0
Cultures for Bacillus diphtheriae :—													
Total . . .	11	4	...	...	3	2	...	...	1	...	4	33	58
Positive . . .	1	3	...	...	0	1	...	...	1	...	1	14	21
Negative . . .	10	1	...	...	3	1	...	...	0	...	3	19	37
Cultures for Bacillus diphtheriae Virulence Test :—													
Total . . .	23	10	5	12	19	15	7	5	1	21	8	34	160
Positive . . .	10	4	1	2	11	7	4	1	0	1	6	19	66
Negative . . .	13	6	4	10	8	8	3	4	1	20	2	15	94
Throat swabs for organisms of Vincent's Angina :—													
Total . . .	2	2	1	2	1	...	1	4	1	2	1	3	20
Positive . . .	1	0	0	0	0	...	0	1	0	0	0	1	3
Negative . . .	1	2	1	2	1	...	1	3	1	2	1	2	17
Throat swabs for Hæmolytic Streptococci :—													
Total . . .	12	...	3	3	...	...	2	1	...	...	...	9	30
Positive . . .	0	...	1	2	...	...	1	0	...	...	...	0	4
Negative . . .	12	...	2	1	...	...	1	1	...	...	...	9	26
Conjunctival swabs for Gonococci :—													
Total . . .	...	...	...	...	1	...	...	...	...	...	...	1	2
Positive . . .	...	...	...	...	0	...	...	...	...	...	...	0	0
Negative . . .	...	...	...	...	1	...	...	...	...	...	...	1	2
Sputum for Bacillus tuberculosis :—													
Total . . .	73	70	88	58	65	68	59	59	45	94	111	115	905
Positive . . .	7	8	4	5	13	9	9	10	10	9	11	20	115
Negative . . .	66	62	84	53	52	59	50	49	35	85	100	95	790
Urine for Bacillus tuberculosis :—													
Total . . .	...	...	1	...	1	...	1	2	1	...	...	...	6
Positive . . .	...	...	0	...	0	...	0	0	0	...	...	...	0
Negative . . .	...	...	1	...	1	...	1	2	1	...	...	...	6
Blood for Widal Reaction (Enteric Fever) :—													
Total . . .	3	4	2	1	8	2	5	5	3	8	7	1	49
Positive . . .	0	1	0	0	1	0	0	1	1	1	1	0	6
Negative . . .	3	3	2	1	7	2	5	4	2	7	6	1	43
Blood for Flocculation Test for Syphilis :—													
Total . . .	12	27	18	13	9	10	16	12	5	...	...	...	122
Positive . . .	3	13	6	1	4	1	6	5	1	...	...	...	40
Negative . . .	9	14	12	12	5	9	10	7	4	...	...	...	82
Fæces and Urine for Enteric Group :—													
Total . . .	...	3	...	...	2	15	...	...	8	1	5	...	34
Positive . . .	...	0	...	...	0	0	...	...	0	0	0	...	0
Negative . . .	...	3	...	...	2	15	...	...	8	1	5	...	34
Fæces for Dysentery Organisms :—													
Total . . .	...	...	...	...	...	...	...	...	...	1	...	1	2
Positive . . .	...	...	...	...	...	...	...	...	...	0	...	0	0
Negative . . .	...	...	...	...	...	...	...	...	...	1	...	1	2
Fæces for B. paratyphosus B :—													
Total . . .	...	...	...	...	...	...	...	1	...	...	...	...	1
Positive . . .	...	...	...	...	...	...	...	0	...	...	...	...	0
Negative . . .	...	...	...	...	...	...	...	1	...	...	...	...	1
Rats examined for Plague infec- tion :—*													
Total . . .	5	2	...	7	6	...	2	7	4	14	4	...	51
Positive . . .	0	0	...	0	0	...	0	0	0	0	0	...	0
Negative . . .	5	2	...	7	6	...	2	7	4	14	4	...	51
*These were carcasses of rats caught in docks or on board ships arriving from foreign ports and were examined as a precautionary measure.													
Forward 8659													

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Other Examinations—Total	3	7	2	6	9	8	22	8	12	9	17	12	Brought forward 8,659
Classified as follows :—													
NATURE OF SPECIMEN.	EXAMINATION REQUESTED.												
Throat swab	For Treponema pallidum	...	...	...	...	...	...	...	...	...	...	...	1
Throat swab and nasal swab	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	32
Sputum	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	7
Sputum	For Pneumococci	...	...	...	...	...	...	...	...	...	...	...	3
Blood	For Wassermann Test	...	...	...	...	...	...	...	...	...	...	...	2 (1 positive)
Blood	For Widal Reaction (Enteric) and agglutination test with	Bacillus abortus	...	...	...	...	...	...	...	...	...	...	3
Blood	For agglutination test with Bacillus abortus	...	...	...	...	...	...	...	...	...	...	...	1
Blood	For culture	...	...	...	...	...	...	...	...	...	...	...	3
Blood Film	For general examination	...	...	...	...	...	...	...	...	...	...	...	1
Cerebro-Spinal fluid	For Flocculation Test for Syphilis	...	...	...	...	...	...	...	...	...	...	...	3 (2 positive)
Cerebro-Spinal fluid	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	3
Cerebro-Spinal fluid	For Meningococci	...	...	...	...	...	...	...	...	...	...	...	1
Urine	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	12
Urine	For Leptospira icterohæmorrhagiæ	...	...	...	...	...	...	...	...	...	...	...	2
Urine	For Bacillus coli	...	...	...	...	...	...	...	...	...	...	...	1
Urine	For Bacillus tuberculosis	...	...	...	...	...	...	...	...	...	...	...	1
Pleural fluid	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	1
Fæces	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	3
Pus	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	6
Pus	For Hæmolytic streptococci	...	...	...	...	...	...	...	...	...	...	...	1
Vaginal discharge ...	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	2
Urethral discharge ...	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	1
Urethral discharge ...	For Gonococci	...	...	...	...	...	...	...	...	...	...	...	1
Liver, P.M. specimen	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	1
Parasite	For identification	...	...	...	...	...	...	...	...	...	...	...	2
Culture	For Streptococci	...	...	...	...	...	...	...	...	...	...	...	1
Vaccines prepared ...	...	...	...	...	...	...	...	...	...	...	...	...	7
Water	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	8
Hide and Sacking ...	For Bacillus anthracis	...	...	...	...	...	...	...	...	...	...	...	2
Canned meat	For organisms of food poisoning group	...	...	...	...	...	...	...	...	...	...	...	1
Canned tomatoes ...	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	1
Water Cress	For general bacteriological examination	...	...	...	...	...	...	...	...	...	...	...	1
												—	115
												Total	8,774

SPECIAL INVESTIGATIONS.

INVESTIGATION INTO THE PREVALENCE OF THE TUBERCLE BACILLUS AND BACILLUS ABORTUS IN MARKET MILK.

In October 1930 a systematic investigation was initiated into the prevalence of tubercle bacilli in market milk. This forms part of a combined inquiry which is being made by the Health Departments of Edinburgh, Glasgow, Aberdeen and Dundee, along with the Hannah Dairy Research Institute. In Edinburgh the work has been shared by the University Bacteriology Department and the City Veterinary Department, two-thirds of the milk samples being examined in the University and one-third in the Veterinary Department. The combined investigation is being co-ordinated by the Department of Health for Scotland, and a uniform bacteriological technique has been agreed on.

The samples are grouped as follows :—“ A ” Raw milk as delivered to the retailers and pasteurisation plants from the farmers, “ B ” Pasteurised milk, and “ C ” Retailed milk as sold from the dairies in the City.

Technique. Each sample of milk is thoroughly mixed and 100 c.c. taken. Of this 50 c.c. is poured into each of two centrifuge tubes and the milk centrifuged at 3,000 r.p.m. for half an hour. The sediment formed in each tube is suspended in 3 c.c. of sterile normal saline solution. Two guinea-pigs are then inoculated each with 3 c.c. of the suspension. The inoculation is subcutaneous and on the inner side of the left thigh. The pair of guinea-pigs so inoculated are kept together in a cage, but separate from other inoculated animals. One guinea-pig is killed at the end of 4 weeks and if it shows a typical tuberculous lesion the other guinea-pig of the pair is also killed. If

it does not show tuberculous lesion the other guinea-pig is kept for 8 weeks from the time of inoculation and then killed. If one guinea-pig dies prematurely from some intercurrent condition the remaining guinea-pig is kept for 8 weeks from the time of inoculation and then killed. No guinea-pig is considered to have a tuberculous lesion unless acid-fast bacilli have been demonstrated microscopically. When doubtful lesions are found cultures are made for the presence of organisms other than the tubercle bacillus, and if necessary further guinea-pigs are sub-inoculated with material from the doubtful lesions. Prior to inoculation all animals are tested with tuberculin (intradermally) to eliminate the possible fallacy of a spontaneous tuberculosis.

This technique has been adopted as being likely to secure the greatest possible accuracy of results combined with economy in the use of animals.

From the 8th of October 1930 to the end of the year 155 samples were examined. The results obtained are given below.

	Samples Examined.	Number Positive.	Test invalid owing to premature death of inoculated animals.
Group A. Raw Milk . . .	40	4	1
Group B. Pasteurised Milk . .	70	2	1
Group C. Retailed Milk . . .	45	7	2

It is to be noted that in the case of Pasteurised Milk the only two samples found to contain living tubercle bacilli were obtained from milk treated by the "Flash" process.

The investigation will be continued over a period of two years with the object of examining 650 samples of each of the three classes of milk referred to. The combined results for the various centres in Scotland should yield a most complete record of the degree of prevalence of tubercle bacilli in cow's milk as vended in the large communities. The samples examined in the University laboratories during the last quarter of 1930 (though limited in number) already show a high prevalence, nearly 12 per cent. and the importance of this systematic enquiry cannot be over-estimated.

The opportunity has also been taken for obtaining some estimate of the prevalence of *Bacillus abortus* (of Bovine Infectious Abortion) in market milk. It is now well known that when a sample of milk containing this organism is injected into a guinea-pig, as in the test for the tubercle bacillus described above, infection results, and after four to eight weeks *Bacillus abortus* can be isolated from internal organs, *e.g.*, spleen. *Bacillus abortus* infection of cow's milk is becoming a matter of importance in Public Health in view of the occurrence of cases of undulant fever ("abortus fever") in the human subject due to this organism. The examination of milk samples for the tubercle bacillus has supplied a ready means of ascertaining whether *Bacillus abortus* is also present, and towards the end of the year a commencement was made with the systematic examination of the spleens and sublumbar glands in the inoculated guinea-pigs after four and eight weeks. Cultures have been made from these tissues and incubated in an atmosphere containing 10 per cent. carbon dioxide which is suitable for the growth of *Bacillus abortus*. The organism has been demonstrated in this way to be present in vended milk, but the enquiry has not yet proceeded sufficiently far for the detailed recording of results.

BACILLUS ABORTUS INFECTION IN MAN.

Within recent years the question of the possibility of infection of man by the *Bacillus abortus* of Bang has been raised. This organism which is the cause of contagious abortion in cattle is very closely allied to *Bacillus melitensis*, the causative

organism of undulant fever. *B. abortus* infection in cattle is widespread in many parts of the country and a proportion of the animals which have suffered from the disease are known to discharge the organism in their milk. Bacteriological studies of mixed milk samples have shown that in some parts of the country 5-10 per cent. may contain this organism.

A considerable proportion of the population must therefore be exposed to the risk of infection and a complete study of known cases is desirable in order that predisposing factors may be defined and the full extent of the incidence of the disease determined.

Clinically, *B. abortus* infection resembles the enteric group of fevers and an agglutination test with the patient's serum may be used for diagnosis. It seems possible, therefore, that some indication of the prevalence of the disease may be obtained by subjecting all sera submitted for the Widal Reaction to a further test with *B. abortus*. During 1930 this has been done in all cases where sufficient serum was supplied.

In February a specimen of serum was examined which gave reactions in high dilution with a number of strains of *B. abortus* and also with strains of *B. melitensis*. By agglutinin-absorption tests it was ascertained that *B. abortus* was almost certainly the infecting organism. Further examination of the blood and urine by cultural and biological tests were negative but it has been an almost constant feature of previously reported cases that the isolation of the organism is a matter of great difficulty.

A second case was diagnosed by means of the routine agglutination reaction in November. The serum again gave negative results with the enteric organisms and agglutinated *B. abortus* strains in high titre.

Both were young male adults whose occupation did not bring them into contact with animals or their products. Their ages were 32 and 29. It is noteworthy that in this disease the age period 20-50 is that most affected. The infrequency of infection in young children has been stated as an argument against the probability of infection being milk-borne. It has, however, been pointed out that in true Malta Fever the age incidence showed a similar distribution while it has been found experimentally that young calves are not susceptible to infection. The susceptibility of cattle increases with the approach of sexual maturity.

From notes of symptoms and signs supplied by the physicians in charge of the cases it was seen that both were very typical in their clinical manifestations.

Both cases were of the milder type which has now been associated with a bovine source of the organism in all parts of the world. Infection has also been described in U.S.A. and elsewhere as resulting from the handling of infected pigs and pork. Such cases tend to be of a more severe clinical type. No undoubted cases of infection from a porcine source have occurred in this country.

The outstanding clinical features in the two Edinburgh cases were the type of fever and the well-being of the patient in association with a marked febrile reaction. In both cases the temperature curve was of the daily remittent type with an irregular rise and fall of the evening temperature. The duration of the two Edinburgh cases was 6 weeks and approximately 13 weeks respectively. The pulse tends to be slow in relation to the high evening temperature, a finding which may give rise to confusion with enteric fever. The resemblance is accentuated by a leucopenia which is stated to be constantly present at some stage of the illness.

Subjective symptoms include muscular pains specially affecting the calf muscles of the leg. Joint pains with stiffness and creaking on movement were features of one of the local cases.

Enquiry directed towards ascertaining the probable source of infection elicited the information that both men had stayed for a short time in cities other than Edinburgh about 3 weeks before the onset of the disease. One had visited Preston and Manchester and the other Glasgow. Both had drunk milk while in these cities. The incubation period of the disease is approximately 3 weeks and the fact that both were isolated cases suggests that infection was acquired elsewhere than in Edinburgh.

Both cases recovered. In most cases of *B. abortus* infection the prognosis is good. The fatality rate among the large number of cases observed in the United States of America has been approximately 2 per cent. while in Denmark the rate in one large series published was 3.4 per cent. The importance of the disease seems to be rather in the prolonged period of invalidism which it causes, 10 weeks being the average duration among American and Danish cases.

With regard to the probable prevalence of the disease, it does not appear to be common despite the presence of the causative organism in a relatively high proportion of milk samples. This is difficult to explain in view of the fact that the organism in culture retains its virulence for man to a marked extent as shown by the high incidence of the disease among laboratory workers in all parts of the world. The same high virulence is shown towards farmers and others handling infected animals while in America the rate of infection among meat-packers handling infected pork is also high.

The fact that cases do occur, however, in which the only possible source of infection appears to be from milk suggests that efforts should be directed towards the elimination of the disease from dairy cattle. In this connection it may be noted that pasteurization by approved methods kills *B. abortus*. (*H. J. Gibson*).

Publication.—"A Further Case of Undulant (*Br. abortus*) Fever Occurring in Scotland." W. H. Wishart and H. J. Gibson. *British Medical Journal*, 1930 (i), page 860.

THE SEROLOGICAL DIAGNOSIS OF ENTERIC FEVER.

During the latter part of 1930 sera submitted to the laboratory for the Widal Reaction were examined by two methods where the quantity of serum was adequate. The customary quantitative test was carried out with the standard laboratory strains of *B. typhosus* (Cole), *B. paratyphosus A* (Schottmüller), and *B. paratyphosus B*. (Tidy). In addition a qualitative receptor analysis was attempted by the use of five strains as recommended by Felix (1930). The advantages which the latter method is said to possess are that normal serum effects are more readily recognised, that the strains recommended are of the utmost sensitiveness—and that a diagnosis is possible in persons suffering from the disease, who have previously been vaccinated against diseases of the enteric group. The method involves the observation of the type of agglutination produced, whether granular or flocculant. An additional advantage which is claimed for the new technique is that the titre-limit of the granular type of agglutination has a definite prognostic significance.

The number of samples of serum which has been examined by both methods is small and the work is being continued. A scrutiny of the results shows, however, that no case would have been missed by the use of the older test only. Further, the more complicated test has not thrown light on cases where the results with the usual technique were equivocal. In one case which was clinically quite typical but in which isolation of the organism was not possible both methods were applied on more than one occasion and the results throughout were inconclusive.

In another instance two sera were examined from patients suffering from clinical enteric fever, both of whom had been in close contact with a previous case from which

B. typhosus had been isolated. The older method indicated clearly that both were *B. typhosus* infections. By the method of receptor analysis the result was doubtful in one of the cases, the serum reacting equally with both *B. typhosus* and *B. paratyphosus* B. A study of the type of agglutination seemed to suggest that the infecting organism was *B. paratyphosus* B. In view of the history of the case this appeared unlikely.

On the small amount of evidence which is so far available the Felix strains appear to be rather more sensitive but this applies equally to normal and immune agglutinins. The advantage of the new method in previously vaccinated cases does not arise in this country where few of the general population have been inoculated. (*H. J. Gibson*).

Reference.—Felix, A. (1930), *Lancet*, 8th March, p. 505.

BACTERIOLOGICAL INVESTIGATIONS ON LOBAR PNEUMONIA.

During the year interest has continued in the incidence of serological types of the pneumococcus in cases of lobar pneumonia. The determination of the type of pneumococcus causing each infection is not merely an academic study but supplies information useful to the epidemiologist for tracing the path of infection of the organism, and since there is considerable difference between the percentage mortality due to the pneumococci of different types—being greatest in type III. and least in type (or group) IV.—the knowledge of the infecting type can be of prognostic value to the clinician. At the present time the efficacy of new preparations of anti-pneumococcal immune serum is being investigated in several medical centres and since each serum contains antibodies against type I. pneumococcus or against both types I. and II (according to the preparation used) another reason is evident for knowing the type of organism causing each infection. The method of determining the type in a case of lobar pneumonia is to inject some of the patient's sputum into the peritoneal cavity of a mouse and to test the pneumococci in the peritoneal washings at the end of 5-24 hours by means of agglutination with type-specific antisera. When the method is being used for guiding the administration of serum to suitable cases the typing test should be carried out as rapidly as possible compatible with accuracy, and in many cases a report can be given 8 or 9 hours after the sputum has been received at the laboratory. During 1929-30, 182 type determinations were made in cases of lobar pneumonia in Edinburgh, with the following results (1):—

Type.	No. of Cases.	Percentage.
I.	53	29
II.	75	40
III.	7	4
IV. (=Group IV.).	47	27

This distribution shows a high percentage of type II. infections and is in contrast to the figures obtained in a similar survey in Edinburgh in 1924-25 (2) in which type I. predominated (60 per cent. of cases). Similar differences of type incidence are revealed from statistics compiled in different parts of the world and at different times. As well as a large percentage of type II. organisms in the Edinburgh series of 1929-30 the mortality was relatively high in the infections due to that type (31 per cent.).

For cases in which no sputum is available for obtaining the pneumococcus, use was made of the method of puncturing the lung through the thoracic wall with a sterile syringe and needle and withdrawing some exudate, with pneumococci, from the consolidated tissue. (3).

As well as these observations with material from patients, experimental work of various kinds was undertaken. Reference has been made to anti-pneumococcal immune sera prepared by new methods, and experiments were carried out with one of these to determine whether the intravenous injection of the serum into normal uninfected persons can be shown to increase the power of their blood to kill the pneumococci of the same type as the serum injected. The results of the experiments have been published (4), and without going into detail it may be said that the effect of injecting the new form of anti-serum was to confer on the blood of the subject a very much greater power of killing pneumococci *in vitro* when some of his defibrinated blood was mixed with pneumococci in the test tube, than the blood possessed before injection of the serum. This gives experimental basis for hope that the serum may be proved to be of use in clinical practice for reducing the mortality and decreasing the severity of lobar pneumonia. At the present time the best results have been obtained with anti-serum in the case of type I. infection and if the usefulness of the present preparations for that type can be confirmed and still better methods devised, encouragement will be provided for continuing to seek for sera efficacious in the treatment of infections with the other types of pneumococcus as well. There need be no hesitation in affirming that the question of the real value of the present and future serum preparations should be tested with the greatest care possible on large numbers of patients and that the results as regards mortality and length of illness should be contrasted with the same features in the case of other patients treated in as nearly as possible the same way, but without serum.

The valuation of any suggested treatment in an acute and serious infection like lobar pneumonia is an important and difficult matter and cannot be securely based on the experience of many clinicians each observing a relatively small number of patients, without the means of recording and correlating the circumstances of their own cases and those of others. The work can be done only in large institutions treating many people. It cannot be hoped that an anti-serum will cure the infection if administration is begun at a late stage in severe infections, and on the other hand cases which receive good nursing and medical attention early in the disease are better situated with regard to recovery than those whose medical care is delayed, whether serum is given or not. In such a situation there is the danger of two undesirable developments if the value of the treatment is not clearly determined—for one thing commercial advertisement may create a demand and use of an expensive product of little value and on the other hand a valuable means of therapy may be neglected. For these reasons an alert interest in the careful testing of new therapeutic measures on the part of the profession generally and in particular of those physicians who undertake the work of large hospitals is to be commended as a sign of willingness to encourage any development likely to bring about an improvement in the health of the public.

Even from the experimental and laboratory point of view, there are difficulties to be seen in the way of effective serum treatment and one of these lies in the fact that during a pneumococcal infection the organisms form and excrete a substance which can combine with and neutralise the immune serum before it reaches the pneumococci themselves. This does not constitute a complete objection to serum treatment for the substance referred to neutralises also the resisting powers of the patient who is not treated with immune serum, so that even if all the injected serum were used up by combining with the pneumococcal excretion the effect should be theoretically, at any rate, to release more of the patient's natural resisting powers to act upon the pneumococci and with a greater amount of immune serum some will be free to increase directly the lethal effect of the patient's blood on the bacteria. While indicating one of the difficulties in rapid and effective serum treatment this also emphasises the need for giving large amounts of therapeutic serum. The substance referred to as excreted by the pneumococcus is in the form of a complex carbohydrate and has been known and studied

for some years. A specimen of it in a highly pure chemical state was prepared in connection with the work on pneumococcal infections (5) and some of its interesting biological properties tested. (*J. M. Alston*).

References :—(1) Alston, J. M. and Stewart, D., *British Medical Journal*, 22nd Nov. 1930, p. 860 ; (2) M'Lachlan, D. G. S., *Journal of the Royal Sanitary Institute*, 1925, Vol. 46, p. 112 ; (3) Stewart, D., *Lancet*, 6th September 1930, p. 520 ; (4) Alston, J. M. and Stewart, D., *British Journal Exper. Path.*, 1931, Vol. 12, p. 49 ; (5) Alston, J. M., Galbraith, G. R. and Stewart, D., *Journal Path. and Bact.*, 1930, Vol. 33, p. 845.

PUBLICATIONS.

In addition to certain publications cited above the following papers on bacteriological subjects in relation to Public Health have been published during the year from the University Department :—

“The Aetiology of Cholecystitis,” by B. Williams and D. G. S. M'Lachlan. *Lancet*, 16th April 1930.

“Occurrence of Typhoid-Paratyphoid Bacilli in Sewage,” by R. S. Begbie and H. J. Gibson. *British Medical Journal*, 12th July 1930.

“Observations on the Hygienic Condition of Public Swimming Baths,” by A. M. M. Grierson. *Journal of Hygiene*, 1930, Vol. 30.

“Atypical Enteric Infections,” by J. D. Allan Gray. *British Medical Journal*, 11th January 1930.

“Microbic Dissociation with Special Reference to Certain Acid-fast Bacilli,” by R. S. Begbie. *Edinburgh Medical Journal*, March 1930.

The members of the Staff of the University Bacteriology Department who took part in the Bacteriological Services of the City were :—Drs. D. G. S. M'Lachlan, J. M. Alston and H. J. Gibson, Lecturers ; Drs. Gow Brown (now Bacteriologist to the County of Lanark) and C. P. Beattie, Special Assistants ; and Drs. B. Williams and Alex. Haddow, Assistants. The work was carried out under the direction of Professor T. J. Mackie.

MOTOR AMBULANCE SERVICE.

Three special motor ambulances are attached to the Department for the removal of patients to the hospitals for the treatment of infectious diseases.

For convenience the cars are stationed at Colinton Mains Hospital, and the duties of the chauffeurs are so arranged that in addition to a continuous day service, urgent cases can be removed at any time during the night.

During the financial year to 15th May the cars registered 38,843 miles, and the cost of the service amounted to £1,321, 11s. 4d., or 8·1 pence per car mile.

DISINFECTION.

Particulars regarding the disinfection of dwelling-houses and other infected places during the last three years are given in the following Table :—

	1928.		1929.		1930.	
	Number.	Apart-ments.	Number.	Apart-ments.	Number.	Apart-ments.
Dwelling-houses, etc. :—						
After Tuberculous Disease . .	1,037	1,264	1,008	1,367	790	1,158
„ other „ . .	3,692	5,411	4,670	6,751	4,770	7,535

The following is a summary of the articles removed for disinfection during the year:—

Description.	No. of Articles.		Description.	No. of Articles.	
	After Tuberculous Disease.	After Other Diseases.		After Tuberculous Disease.	After Other Diseases.
Mattresses and Palliasses .	917	2,686	Body Clothes . . .	649	14,231
Blankets, Sheets, Quilts, etc.	3,148	9,049	Carpets and Rugs . .	17	285
Beds, Pillows, Bolsters, etc.	1,920	4,180	Miscellaneous . . .	159	1,607
Curtains, Table Covers, Wraps, etc. . . .	57	246	Destroyed by request .	339	232
Table Napery, Toilet Covers, Towels, etc. . . .	144	873	Totals . . .	7,350	33,389

Second-hand Clothing.—In consequence of Regulations passed by the Irish Free State Government it is now compulsory for exporters of second-hand clothing, etc., to produce a certificate showing that disinfection has been thoroughly carried out, otherwise their goods could not be admitted to the Free State. During the year 267 consignments were submitted for disinfection by dealers in the City, and certificates were granted by the Medical Officer of Health.

DISINFECTION STATION.

Two high-pressure steam chambers are provided for the disinfection of bedding and clothing. In addition to the ordinary work carried on at the disinfecting station there is also provision for cleansing persons who may be in a verminous condition and also for the treatment of scabies. During the year 767 persons attended for baths and disinfection of clothing. Of these 301 adults and 6 children were in a verminous condition, while 118 adults and 342 children suffered from scabies.

RECEPTION HOUSE.

The Reception House was occupied for a few days in the month of June by a family of six adults. The family resided in the Eastern district of the City and had as a boarder a railway servant who slept every alternate night at their house. This man developed smallpox and was removed to hospital while in London. On receipt of information from the London Health Authorities, the house was immediately visited and the contacts were vaccinated and removed to the Reception House for observation. There were no further developments.

INTERMENTS.

(In terms of Section 60, Public Health (Scotland) Act, 1897.)

Application for assistance to bury deceased relatives was made to the Department in 62 instances. These were carefully inquired into in order to ascertain whether necessity really existed.

As a result of these inquiries 4 applications were refused and 4 were withdrawn. In another 3 cases the deceased persons had been in receipt of outdoor relief from the Public Assistance Committee, who became responsible for the burial. The remaining 50 interments were paid for through the Department.

The following statement shows the expenditure in connection with interments during the last five years :—

Year.	Number.	Total Cost of Interments and Removals.	Sums Repovered from Relatives.	Net Expenditure.
1926	52	£181 15 0	£2 12 6	£179 2 6
1927	54	177 15 0	22 8 0	155 7 0
1928	48	126 13 6	7 13 6	119 0 0
1929	51	153 3 6	17 18 5	135 5 1
1930	50	138 15 6	33 17 9	104 17 9

HOSPITAL EXPENDITURE.

The following Table shows the cost per occupied bed per annum in Colinton Mains Hospital during the last seventeen years. The particulars apply in each case to the financial year to 15th May, and are based on the gross ordinary expenditure.

Year to 15th May.	Daily Average Number of Occupied Beds.	* Cost of Food.	† Cost of Maintenance.	Total Cost of Occupied Bed per annum.
1914	469	£21 12 6	£44 0 8	£65 13 2
1915	596	21 0 0	34 9 9	55 9 9
1916	557	24 8 11	36 15 9	61 4 8
1917	497	31 16 0	43 1 10	74 17 10
1918	471	37 14 8	47 10 9	85 5 5
1919	521	40 1 0	55 2 2	95 3 2
1920	585	39 10 4	59 0 0	98 10 4
1921	543	44 5 10	79 4 10	123 10 8
1922	538	32 11 5	74 3 6	106 14 11
1923	472	26 19 4	72 15 10	99 15 2
1924	397	30 17 5	86 3 2	117 0 7
1925	519	25 10 1	70 0 2	95 10 3
1926	430	29 17 6	84 19 6	114 17 0
1927	371	31 4 10	97 16 0	129 0 10
1928	393	30 9 9	87 5 9	117 15 6
1929	308	35 11 4	116 17 1	152 8 5
1930	463	27 17 7	82 16 2	110 13 9

* Includes food for Staff.

† Includes salaries, heating, lighting, upkeep of buildings and grounds, taxes, etc.

The expenditure for provisions is detailed below :—

Butcher Meat	£2,809 19 11
Fish, Fowls, etc.	1,263 7 9
Butter, Cheese, and Bacon	1,357 13 0
Eggs	871 9 4
Groceries.	1,469 1 2
*Milk	3,340 10 8
Bread	1,233 4 11
Oatmeal and Flour	160 16 6
Potatoes and Vegetables	210 3 2
Aerated Waters, etc.	64 8 2
	<u>£12,780 14 7</u>

* The total quantity was 37,818 gallons, an average of 103 gallons per day, equal to $1\frac{1}{4}$ pints per head per day.

The total cost of stimulants for the year amounted to £39, 17s. 6d., as against £36, 5s. 10d. in 1929, and was expended as follows :—

Diphtheria Patients	£1 13 10
Scarlet Fever Patients	5 13 4
Whooping Cough Patients	1 13 10
Measles Patients	3 2 8
Enteric „	7 19 6
Phthisis „	12 8 0
Erysipelas „	6 11 2
Other Diseases	15 2
	<u>£39 17 6</u>

The cost of serum during the year amounted to £1,853, 19s. 9d.

ROYAL VICTORIA HOSPITAL.

(Cost per Occupied Bed.)

Year to 15th May.	Daily Average Number of Occupied Beds.	* Cost of Food.	† Cost of Maintenance.	Total Cost of Occupied Bed per annum.
1922	62	£57 1 9	£80 14 10	£137 16 7
1923	60	37 10 7	73 10 11	111 1 6
1924	67	34 15 4	69 6 9	104 2 1
1925	77	31 9 11	73 8 8	104 18 7
1926	77	31 2' 3	68 0 9	99 3 0
1927	73	34 16 2	70 1 11	104 18 1
1928	71	32 14 2	67 11 8	100 5 10
1929	68	35 18 11	85 11 2	121 10 1
1930	71	34 18 7	74 11 2	109 9 9

* Includes food for Staff.

† Includes salaries, heating, lighting, upkeep of buildings and grounds, taxes, etc.

PILTON HOSPITAL.

(Cost per Occupied Bed.)

Year to 15th May.	Daily Average Number of Occupied Beds.	* Cost of Food.	† Cost of Maintenance.	Total Cost of Occupied Bed per annum.
1922	92	£46 2 10	£97 0 11	£143 3 9
1923	100	36 19 9	82 14 1	119 13 10
1924	109	37 15 5	95 18 8	133 14 1
1925	116	33 16 2	73 3 10	107 0 0
1926	120	32 9 3	67 9 4	99 18 7
1927	115	32 1 6	72 6 9	104 8 3
1928	118	32 5 3	66 1 7	98 6 10
1929	121	31 16 4	72 19 9	104 16 1
1930	112	30 12 9	75 3 9	105 16 6

* Includes food for Staff.

† Includes salaries, heating, lighting, upkeep of buildings and grounds, taxes, etc.

PUBLIC HEALTH EXPENDITURE.

1908-1930.

Year.		Gross Expenditure.	Revenue.	Net Expenditure.
1907-8		£34,295	£601	£33,694
1908-9		34,218	690	33,528
1909-10		35,159	699	34,459
1910-11		34,869	718	34,150
1911-12		35,072	780	34,291
1912-13	T.B. Scheme begun.	37,618	2,690	34,927
1913-14		46,094	14,548	31,546
1914-15		56,768	18,716	38,051
1915-16		56,827	12,997	43,829
1916-17	C.W. Scheme begun.	58,323	23,216	35,107
1917-18		75,198	30,552	44,645
1918-19	V.D. Scheme begun.	99,563	43,029	56,533
1919-20		130,877	49,138	81,738
1920-21	Amalgamation with Leith.	210,875	89,098	121,777
1921-22		184,315	68,450	115,865
1922-23		146,395	67,477	78,917
1923-24		149,873	47,554	102,319
1924-25		156,155	48,949	107,206
1925-26		156,919	54,185	102,734
1926-27		157,895	56,439	101,455
1927-28		* 172,763	56,999	115,764
1928-29		* 177,008	60,512	116,496
1929-30		* † 230,234	68,762	161,472
Mental Deficiency and Lunacy		* 162,934	70,037	92,897

* Includes Interest and Debt Charges.

† Includes Hospitals for Sick Poor.

MATERNITY AND CHILD WELFARE.

The following Report in connection with Child Welfare has been prepared by Dr. T. Y. Finlay, who is in charge of this branch of the Department :—

I have the honour to submit a report of the work under the Maternity and Child Welfare Scheme during the year 1930.

BIRTHS.

The number of births registered in the City during the year was 7,994. Of these, 4,015 were males and 3,979 females, being in the proportion of 101 boys to every 100 girls. The number of illegitimate births was 635 or 7·9 per cent., as compared with 724, or 9·2 per cent. for the previous year.

Quarter.	Number of Births Registered.	SEX.		Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
		Males.	Females.			
1st .	2,058	1,044	1,014	1,880	178	8·6
2nd .	1,992	991	1,001	1,839	153	7·7
3rd .	1,969	985	984	1,802	167	8·3
4th .	1,975	995	980	1,838	137	7·0
Totals	7,994	4,015	3,979	7,359	635	7·9

The following Table gives particulars regarding the births after the necessary corrections have been made for transfers :—

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st .	1,892	1,772	120	6·3
2nd .	1,836	1,731	105	5·7
3rd .	1,765	1,646	119	6·7
4th .	1,814	1,717	97	5·3
Totals	7,307	6,866	441	6·0

Illegitimate Births.—The percentage of illegitimate births to the total corrected births for the year was 6·0 compared with 7·3 for the year 1929.

Birth-rate.—The birth-rate based on the corrected number of births was equivalent to 17·2 per 1,000 of the estimated population, compared with 17·1 the rate for 1929.

In the following Table the births are allocated according to the three areas of the extended City. The births belonging to military quarters, and those occurring in institutions, for which no permanent domicile could be ascertained, are shown under separate headings. Fuller details regarding the distribution of the births in the various Wards of the City will be found in the Table on page 62.

Area.	Births.	Rate per 1000 of Population.
Edinburgh	5,102	16·6
Leith	1,627	20·6
Suburban	416	13·6
Institutions	117	....
Military Quarters	45	....
Whole City :	<u>7,307</u>	<u>17·2</u>

Below are given the corrected birth-rates for the eight large towns in Scotland and for the whole of Scotland for 1930.

TOWN.	Per 1000 of Population.	TOWN.	Per 1000 of Population.
Glasgow	21.5	Paisley	20.4
Edinburgh	17.2	Greenock	22.9
Dundee	21.0	Motherwell and Wishaw	20.6
Aberdeen	20.8	Clydebank	19.4

SCOTLAND 19.3

Notification of Births.—The number of births notified during the year was 8,428. Of this total, 7,511 were stated to be born at term, and 518 to be premature ; 399 were still-born.

An Analysis of the 8,428 births notified during the year shows the following results :—

I. Births attended by Private Doctors	2039
II. Births attended by Private Doctors with a District Nurse—	
(1) Queen's Nurses	1118
(2) Buccleuch Place Nurses	184
	1302
III. Births attended by Registered Midwives	418
IV. Births attended by Students and Pupil Nurses in their own homes—	
(1) Royal Maternity Hospital	1001
(2) Elsie Inglis Memorial Hospital	265
(3) Cowgate Dispensary	350
(4) Deaconess Hospital	69
(5) Edinburgh Lying-in Institution	90
	1775
V. Births attended in Maternity Hospitals and Training Centres—	
(1) Royal Maternity Hospital	1879
(2) Elsie Inglis Memorial Hospital	877
(3) Deaconess Hospital	4
(4) Edinburgh Lying-in Institution	90
(5) Craighleith Hospital	44
	2894
	<u>8428</u>

As already stated, the still-births notified during the year numbered 399, a decrease of 9 when compared with last year.

The following Table gives an analysis of comparable figures in percentages of the births for the past five years :—

	1926.	1927.	1928.	1929.	1930.
Births attended by—	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Private Doctors	41	43	43	49	40
Private Doctors with a District Nurse }					
Registered Midwives	5	6	5	5	5
Students and Pupil Nurses in Patient's Home	24	22	22	18	21
In Maternity Hospitals and Training Centres	30	29	30	28	34
	100	100	100	100	100

Infant Mortality.—The deaths of infants under one year registered during 1930 numbered 596, which is 15 more than those recorded for the previous year. The mortality rate was equivalent to 82 per 1,000 births.

The following figures show the distribution of the deaths under one year in the different districts of the City, together with the mortality rate for the respective areas :—

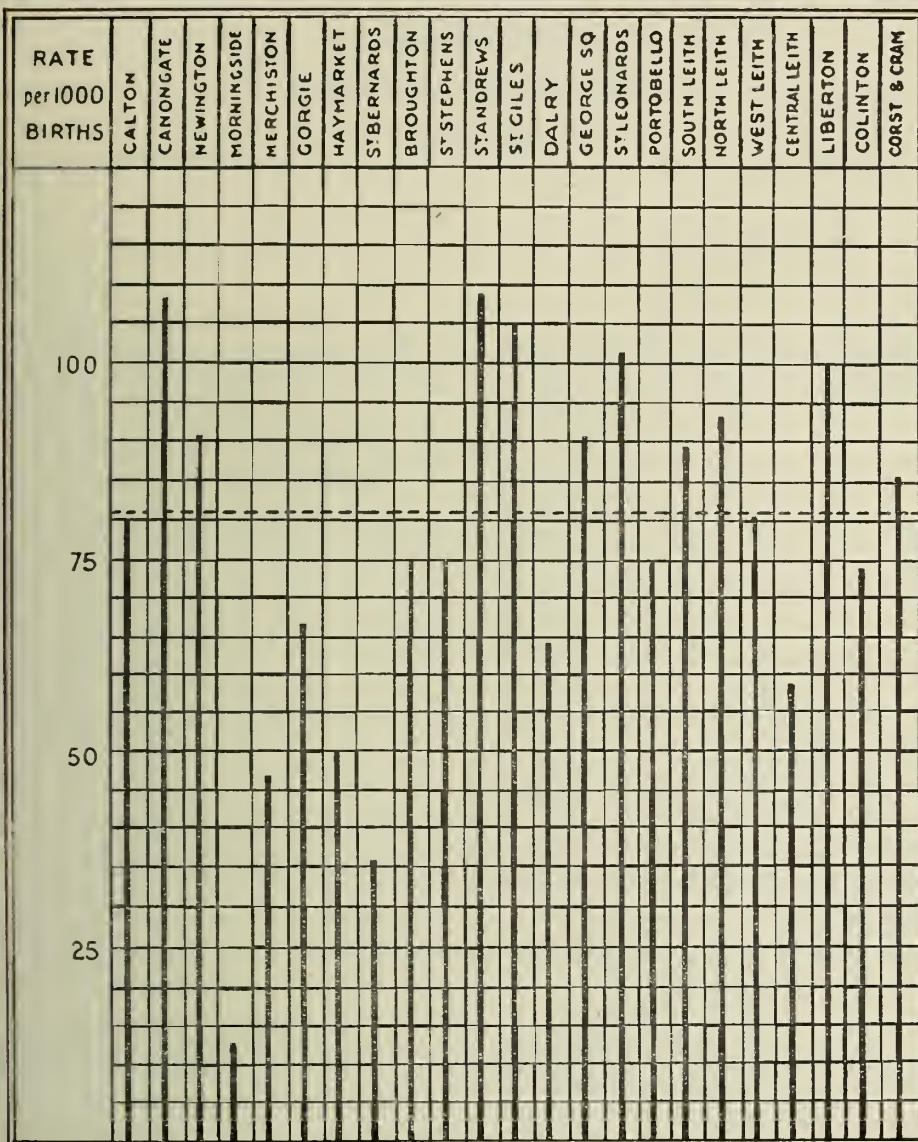
Area.	Deaths under 1 year.	Deaths per 1000 Births.
Edinburgh	400	78
Leith	135	83
Suburban	37	89
Institutions	22	...
Military Quarters . .	2	...
Whole City	596	82
Figures for 1929 . .	581	80

The next Table gives particulars regarding the births and deaths of children at age periods from one to five years, and also the infantile mortality in each of the twenty-three municipal Wards.

WARD.	BIRTHS.		DEATHS.						Infantile Mortality (Rate per 1000 Births).
	Number.	Per 1000 of Population.	Under 1 Year.	1-2.	2-3.	3-4.	4-5.	Total.	
Calton	364	17·3	29	7	2	2	2	42	80
Canongate	435	20·8	47	15	9	3	6	80	108
Newington	276	14·1	25	7	4	4	...	40	91
Morningside	152	7·4	2	...	...	...	1	3	13
Merchiston	212	10·7	10	2	...	...	1	13	47
Gorgie	552	21·8	37	7	3	3	1	51	67
Haymarket	221	13·6	11	4	...	3	...	18	50
St. Bernard's	247	13·7	9	2	4	3	...	18	36
Broughton	223	15·4	17	3	2	1	...	21	76
St. Stephen's	263	16·1	20	5	2	...	1	27	76
St. Andrew's	186	17·8	20	9	2	3	...	37	108
St. Giles	386	20·8	41	26	5	3	3	78	106
Dalry	360	17·5	23	6	4	2	4	39	64
George Square	330	16·5	30	11	3	3	1	48	91
St. Leonard's	442	23·7	45	22	7	...	3	77	102
Portobello	453	17·5	34	9	6	1	6	56	75
South Leith	538	19·0	48	10	2	2	2	64	89
North Leith	460	24·8	43	16	3	3	1	66	93
West Leith	321	17·6	26	5	3	1	2	37	81
Central Leith	308	22·8	18	12	4	2	...	36	58
Liberton	179	17·0	18	5	3	2	1	29	101
Colinton	95	13·3	7	...	1	...	...	8	74
Corstorphine and Cramond .	142	11·1	12	...	...	...	...	12	86
Institutions	117	...	22	6	...	2	...	30	...
Military Quarters	45	...	2	...	...	...	...	2	...
Totals	7,307	17·2	596	189	69	43	35	932	82
Edinburgh Area	5,102	16·6	400	135	53	31	29	648	78
Leith Area	1,627	20·6	135	43	12	8	5	203	83
Suburban Area	416	13·6	37	5	4	2	1	49	89
Institutions	117	...	22	6	...	2	...	30	...
Military Quarters	45	...	2	...	...	...	...	2	...

In the following Diagram the infantile mortality experienced in the various Wards can be readily compared with the rate for the City.

INFANTILE MORTALITY.—DEATHS PER 1000 BIRTHS.



----- Infantile Mortality Rate for City

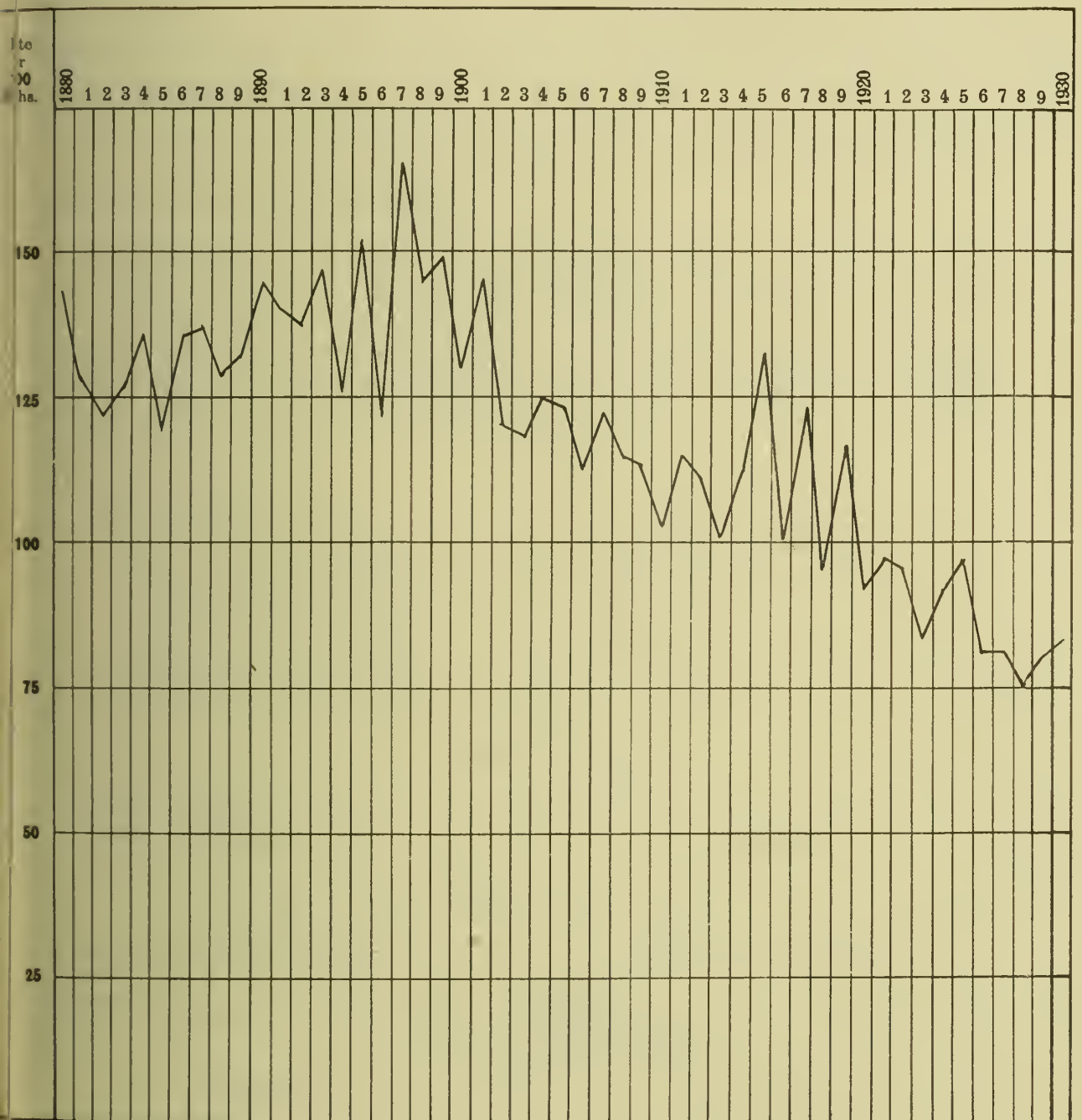
Causes of Death among Children under Five Years during 1930.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years.
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chickenpox . . . . .	...	...	...	...	...	...	3	9	14	26	56	11	7	2	76
Measles . . . . .	...	...	...	...	...	...	...	...	...	...	1	2	...	...	3
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	26	9	5	2	42
Whooping Cough . . . . .	...	...	...	...	...	7	5	5	11	28	14	6	9	11	40
Diphtheria and Croup . . . . .	...	...	...	...	...	2	...	1	1	3	...	1	...	...	1
Erysipelas . . . . .	...	...	...	...	...	...	3	1	2	6	3	4	1	1	9
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	1	2	...	3	1	2	1	...	4
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	1	1	...	2	5	3	3	3	14
Other Tuberculous Disease . . . . .	...	...	...	...	...	2	1	1	1	5	3	...	1	1	5
Meningitis (not Tuberculous) . . . . .	...	...	...	...	...	...	2	...	...	5	1	...	...	...	...
Hydrocephalus	2	1	...	...	3	...	2	...	...	5	1	...	...	...	...
Convulsions	2	1	...	...	3	2	2	4	4	15	1	2	...	...	3
Pneumonia (all forms)	1	1	...	...	2	21	30	26	20	99	48	17	7	2	74
Bronchitis	1	...	2	...	3	7	2	8	3	23	4	2	...	...	6
Laryngitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Diarrhoea and Enteritis . . . . .	...	...	...	...	...	8	23	3	4	38	3	...	2	...	5
Other Digestive Diseases . . . . .	...	...	...	...	...	2	4	2	2	10	2	3	2	3	10
Congenital Malformations	5	5	2	...	12	6	...	1	...	19	2	...	...	...	2
Congenital Heart	9	2	...	...	11	...	...	...	...	11	...	...	...	...	...
Premature Birth	103	10	7	5	125	7	5	...	1	138	...	...	...	...	...
Atrophy, Debility, and Marasmus	23	1	3	3	30	11	12	4	1	58	...	...	...	...	...
Atelectasis	6	2	...	...	8	...	...	...	...	8	...	...	...	...	...
Injury at Birth	22	...	1	...	23	...	...	...	...	23	...	...	...	...	...
Suffocation, overlaying	1	...	...	...	1	1	...	...	...	2	...	...	...	...	...
Syphilis . . . . .	...	1	...	...	1	2	1	1	...	5	...	...	...	...	...
Rickets . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	9	...	3	1	13	17	21	10	6	67	19	7	4	10	40
Totals	184	23	19	9	235	95	116	80	70	596	189	69	43	35	336

Causes of Death among Illegitimate Children under Five Years during 1930.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years.
Smallpox
Chickenpox
Measles	1	1	2	7	1	...	...	8
Scarlet Fever	1	...	...	1
Whooping Cough	1	...	4	5	2	1	...	1	4
Diphtheria and Croup	2	...	1	2	5
Erysipelas
Tuberculous Meningitis	1	...	...	1
Abdominal Tuberculosis
Other Tuberculous Disease	1	...	1	3	...	...	...	3
Meningitis (not Tuberculous)	1	...	...	...	1	1	...	...	...	1
Hydrocephalus	1	...	...	...	1
Convulsions	1	1	...	1	...	...	1
Pneumonia (all forms)	4	2	2	1	9	5	...	3	1	9
Bronchitis	1	...	1	2	...	2	...	5	...	...	...	...	...
Laryngitis
Diarrhoea and Enteritis	2	3	...	1	6	...	...	...	...	...
Other Digestive Diseases
Congenital Malformations	3	...	...	...	3	...	...	...	...	...
Congenital Heart
Premature Birth	5	2	...	...	7	1	...	...	...	8	...	...	...	...	...
Atrophy, Debility, and Marasmus	1	...	...	...	1	4	7	1	1	14	...	...	...	...	...
Atelectasis
Injury at Birth	3	...	1	...	4	...	...	...	...	4	...	...	...	...	...
Suffocation, overlaying
Syphilis	1	1	1	...	3	...	...	...	...	...
Rickets
All other Causes	5	...	1	...	6	1	1	2	...	10	2	...	...	...	2
Totals	14	2	3	...	19	19	15	10	9	72	23	5	4	4	36

EDINBURGH
INFANTILE MORTALITY
1880-1930.



Neonatal Death-rate.—In the following Table the deaths under one year have been tabulated to show various important causes of death :—

FOUR CHIEF CAUSES OF DEATH OCCURRING IN THE NEONATAL PERIOD.
(Rate per 1000 Births.)

	1926.	1927.	1928.	1929.	1930.
Congenital Malformations .	4.9	5.1	3.6	4.3	4.1
Injuries at Birth . . .	2.3	2.4	3.0	2.7	3.1
Prematurity	14.6	18.5	14.9	18.0	18.9
Atrophy, Debility and Marasmus	11.3	9.4	7.2	7.5	7.9

Most of these conditions, it may be assumed, are such as should be beneficially influenced by ante-natal and natal care.

Maternal Deaths.—The total number of maternal deaths which occurred in the City during the year was 92, showing an increase of five compared with the previous year. Of the 92 deaths 34 were of women who had come to the City for their confinement, and their deaths were transferred to the district of permanent residence. One death occurring outside the City was transferred to Edinburgh as the district of permanent residence, giving a total of 59 deaths of Edinburgh citizens, to which the following details refer :—

Ages at Death—

Under 20 years . . .	1 or 1.7 per cent. of the total.
20 years and under 25 years . . .	6 „ 10.2 „ „ „
25 years and under 30 years . . .	14 „ 23.7 „ „ „
30 years and under 35 years . . .	17 „ 28.8 „ „ „
35 years and under 40 years . . .	14 „ 23.7 „ „ „
40 years and under 45 years . . .	6 „ 10.2 „ „ „
45 years and under 50 years . . .	1 „ 1.7 „ „ „
Total	59 100.0

Causes of Death—

Septicæmia.

Puerperal sepsis	13
	— 13

Toxæmia.

Pregnancy toxæmia without convulsions	5
Eclampsia	10
Hyperemesis	2
Acute Yellow Atrophy	1
Uræmia	1
	— 19

Hæmorrhage.

Antepartum Hæmorrhage	1
Postpartum Hæmorrhage	2
Placenta Prævia	1
	— 4

Conditions complicating Labour.

Diphtheria	1
Cholecystitis with subphrenic abscess . . .	1
Acute Bronchitis	2
Lobar Pneumonia	4
Septic Broncho Pneumonia	1
Acute Pulmonary Tuberculosis	1
Organic Heart Disease	3
General Peritonitis	2
	— 15

Embolism.

Number of Deaths	1
	— 1

Unclassified Various Causes.

Shock	3
Meningitis	2
Puerperal Mania	1
Thrombo Phlebitis	1
	— 7

Total 59

MATERNAL DEATHS, 1930.	Septicæmia.	Toxæmia.	Hæmorrhage.	Embolism.	Illnesses compli- cating Labour.	Unclassified Causes. Various.	Totals.
Cases attended by—							
Private Doctors and died at home . . .	0	2	1	1	5	1	10
Private Doctors and removed to Institutions.	10	8	2	0	3	4	27
Midwives and removed to Institutions . . .	0	0	0	0	1	0	1
Dispensaries and Pupil Nurses and removed to Institutions	3	2	0	0	0	2	7
Dispensaries and Pupil Nurses at home . . .	0	1	0	0	0	0	1
In Institutions	0	6	1	0	6	0	13
Totals . . .	13	19	4	1	15	7	59

MATERNAL DEATHS, 1926-30.	1926.	1927.	1928.	1929.	1930.
Cases attended by—	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Private Doctors and died in their own homes	26	11	14	10	17
Private Doctors and removed to Institutions	10	25	23	35	45
Midwives and removed to Institutions . . .	12	0	3	0	2
Dispensaries and Pupil Nurses and removed to Institutions	12	9	17	8	12
Dispensaries and Pupil Nurses at home . . .	2	4	0	6	2
In Institutions	38	51	43	41	22
	100	100	100	100	100

Midwives Act.—Report for the year in terms of the Midwives (Scotland) Act, 1915 :—

1. The number of certified Midwives who intimated to the Local Authority their intention to practice in the district 14
2. (a) Total number of Births 7994
- (b) Total number of Deaths of New-born Children (within 10 days) 236
- (c) Actual number of Births attended by Midwives 418
- (d) Deaths of New-born Children occurring in the practice of Midwives 2
- (e) Number of Births not attended by a Doctor or Midwife 0
3. (a) Total number of cases of Ophthalmia Neonatorum 21
- (b) Actual number of cases of Ophthalmia Neonatorum occurring in the practice of Midwives 3
- (c) Actual number of cases occurring where confinement not attended by a Doctor or Midwife 0
4. (a) Total number of cases of Puerperal Sepsis 81
- (b) Total number of Deaths from Puerperal Sepsis *17
- (c) Actual number of cases of Sepsis in practice of Midwives 0
- (d) Actual number of Deaths from Puerperal Sepsis in practice of Midwives 0
- (e) Actual number of cases occurring where confinement not attended by a Doctor or Midwife 0
5. (a) Total number of Still-births 399
- (b) Actual number of cases of Still-births occurring in the practice of Midwives 7
6. Cases of Emergency 26

* Includes 4 deaths transferred to other districts.

The total cases of emergency in which medical practitioners were called in, under Section 22 of the Act, during 1930 are noted in the following classified list, and number 26 compared with 15 in 1929.

Delayed labour	10
Prolapse of cord	1
Adherent Placenta	1
Still-births	7
Prematurity	3
Illness of child	2
Pre-eclampsia	1
Abortion	1
	<hr/>
	26
	<hr/>

The following figures are given in connection with the **Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations (Scotland), 1929** :—

Total number of cases of puerperal fever	81
„ „ „ puerperal pyrexia	87
„ „ „ deaths	21
„ „ „ cases removed to Infectious Diseases Hospital—	
* (a) Fever	18
(b) Pyrexia	74

* In addition to these, eleven cases admitted as puerperal fever were found to be suffering from various other conditions.

Number of cases of puerperal fever and puerperal pyrexia where assistance was provided :—

1. Consultant	10 cases.
2. Hospital treatment	92 „

Visiting in the Home.—Visits are paid in the home for general supervision by the Health Visitor, and where she considers it necessary for a doctor to be in attendance and the parents are unable to provide one, the case is visited by one of the assistant medical officers from the Department. During the past year 6,339 infants under one year of age were kept under supervision and these received 33,670 visits in all ; 51,063 visits were paid to children between one and five years of age, 649 of which were visited for the first time at this age period. In addition 3,454 special visits were paid to 1,914 expectant mothers. During the same period the assistant Medical Staff were called upon to pay 2,510 first visits and followed these up with a total of 1,872 subsequent visits.

Regular fortnightly visits of a social character are paid by a willing band of voluntary workers, details of whose visits and many other activities are published in an Annual Report separately issued by them and which can be had on application to the Child Welfare Department.

In the following Table particulars are given regarding the number of **Ante-Natal Clinics** held during the year, together with the attendances at the respective centres.

CENTRE.	Number of Clinics held.	ATTENDANCES.		
		New Cases	Old Cases.	Total.
Cowgate	98	472	755	1,227
Torphichen Street	49	76	206	282
Marshall Street	47	50	172	222
Royal Maternity Hospital	364	2,632	7,390	10,022
Leith	49	231	232	433
Elsie Inglis Memorial Hospital	155	1,198	3,483	4,681
Totals	762	4,629	12,238	16,867
Figures for 1929	775	3,954	12,707	16,661

In the following Table particulars are given regarding the number of **Post-Natal Clinics** held during the year, together with the attendances at the respective centres.

CENTRE.	No. of Clinics held.	Attendances.
Royal Maternity Hospital	52	1315
Elsie Inglis Memorial Hospital	101	1020
Torphichen Street Dispensary	49	171
Totals	202	2506

There are thirteen Infant Welfare Centres for the following work :—

Preventive Clinics.—These are held for the prevention and correction of dietetic errors and minor ailments. The undernoted figures will give an indication of their scope.

CENTRE.	Number of Clinics held.	NEW CASES.			TOTAL ATTENDANCES.		
		Under 1 year.	Over 1 year.	TOTAL.	Under 1 year.	Over 1 year.	TOTAL.
Gorgie	92	208	79	287	1,636	1,255	2,891
Torphichen Street	101	224	76	300	2,348	1,959	4,307
High Street	103	143	10	153	2,624	2,416	5,040
Pleasance	143	334	115	449	4,366	3,548	7,914
Windsor Street	82	207	119	326	1,795	1,082	2,877
Stockbridge	93	194	42	236	2,270	1,927	4,197
* Marshall Street	49	124	66	190	1,052	426	1,478
* Elsie Inglis Memorial Hospital	143	273	134	407	1,873	1,156	3,029
TOTALS	806	1,707	641	2,348	17,964	13,769	31,733
Figures for 1929	751	1,556	527	2,083	16,575	11,281	27,856

* These Dispensaries receive a grant from the Corporation.

The following Table shows the number of **Curative Clinics** held at the various Centres and Dispensaries, with the total attendances at each.

CENTRE	Number of Clinics held.	ATTENDANCES.		
		Old Cases.	New Cases.	TOTAL.
* Cowgate	97	2,094	253	2,347
Gorgie	50	411	199	610
* Torphichen Street	52	280	192	472
High Street	42	1,474	68	1,542
* Marshall Street	46	370	108	478
Portobello	95	2,324	185	2,509
* Richmond Street	47	1,319	150	1,469
* Riego Street	51	958	129	1,087
Leith	153	3,159	1,498	4,657
* Elsie Inglis Memorial Hospital	101	596	441	1,037
TOTALS	734	12,985	3,223	16,208
Figures for 1929	696	13,387	3,302	16,689

* These Dispensaries are subsidised by the Corporation, the clinics being conducted by doctors on the regular staffs of the Dispensaries.

The following Table gives the statistical facts in relation to the **Ultra Violet Ray Therapy** carried on during the past year.

CENTRE.	Number of Cases.	Number of Exposures given.	
		M.V. Lamp.	C.A. Lamp.
Leith	63	1,387	...
Pleasance	213	1,082	1,946
Totals	276	2,469	1,946

The type of cases dealt with were mainly those suffering from active rickets, general debility, and children convalescent from pneumonia, measles, and whooping cough. As the result of careful selection of suitable cases the general improvement of the children has been very satisfactory.

The accompanying Table shows the attendances at each of the four Day Nurseries.

Day Nursery.	Attendances—Infants.	Attendances—Children.	Total Attendances.
Henderson Row	936	2,558	3,494
Dumbiedykes Road	2,181	4,518	6,699
Viewforth Terrace	724	3,663	4,387
South Fort Street, Leith	1,525	6,657	8,182
- TOTALS	5,366	17,396	22,762
Figures for 1929	6,773	17,350	24,123

The Day Nursery in Danube Street was transferred to Henderson Row in April and that in Grove Street to Viewforth Terrace on the 12th June.

At Leith Day Nursery six cots are set apart for the reception of healthy children whose mothers have to enter hospital for treatment. In many cases it is impossible for the parents to make adequate arrangements for the care of the younger members of the family during the mother's absence. In such circumstances the children are kept in residence at the Nursery day and night until the mother returns to her home.

The following figures represent the attendances at the thirteen **Toddler Play Centres**.

Centre.	No. on Roll.	Daily Attendance.	Centre.	No. on Roll.	Daily Attendance.
Fountainbridge	40	28	Central Halls	50	30
High Street	60	28	Leith—Keddie Pk.	90	78
Pleasance	50	44	„ Junction St.	60	47
Stockbridge	32	31	Barony Street	49	34
Cowgate	38	24	Chessel's Court	23	17
High School Yards	30	25	Portobello	40	32
Fishmarket Close	45	30	Totals	607	448

The distribution of **milk and dinners** during the year was as follows:—

Milk—Assisted	82,048½ pints.
Free	230 „
Dinners—Assisted	15,123
Free	6

The following facts refer to **Measles and Whooping Cough**.

The number of notifications of measles was 7,182, and 804 were removed to hospital, while 106 deaths occurred during the year from this condition. The number of notifications of whooping cough was 1,638, and of these 183 were removed to hospital. Seventy-two deaths from this disease were recorded during the year. Particulars of the deaths from measles and whooping cough are shown in the following Table :—

CAUSE OF DEATH.	Age Periods.			Totals.
	-1.	1-5.	Over 5 Years.	
Measles	1	3	0	4
„ with Pneumonia	22	69	3	94
„ „ Bronchitis	1	1	0	2
„ „ Other Causes	2	3	1	6
Totals	26	76	4	106
Whooping Cough	3	1	0	4
„ „ with Pneumonia	15	34	1	50
„ „ „ Bronchitis	4	0	1	5
„ „ „ Other Causes	6	7	0	13
Totals	28	42	2	72

Ophthalmia Neonatorum.—During the year 21 cases of this disease were notified ; a decrease of 8 on the previous year. The interval in days between the birth of the child and the onset of the disease was as follows :—

Days .	1	2	3	4	5	6	7	8	9	10	Over 10 days and under 3 months.	No Particulars.	Total.
Cases .	1	2	0	1	1	1	1	1	1	2	5	5	21

The Confinement was attended by :—

A Doctor and Nurse	10 cases.
Nurses from Institutions	1 case.
By Dispensaries	1 case.
In Institutions	6 cases.
Midwives	3 cases.—Total, 21 cases.

Treatment was given :—

At Home	10 cases.
At Home and Welfare Centres	1 case.
In Hospital	10 cases.—Total, 21 cases.

Hospital treatment was given :—

In Pilton Hospital	6 cases.
Elsie Inglis Memorial Hospital	4 cases.—Total, 10 cases.

A Queen's Jubilee Nurse or a Nurse from the Royal Maternity Hospital attended to those children who were treated in their homes. The Health Visitor paid 94 follow-up visits.

In one case the sight was lost in one eye and in all other cases the eyes were cleared.

The number of Institutions registered as **Maternity Homes** under the general supervision of the Local Authority is 31, which figure includes the two large Maternity Hospitals in the City, and shows a decrease of one compared with the number registered in 1929. During the year two new homes were registered and three were given up.

There are two homes for the reception of unmarried mothers, before and after confinement, which receive annual grants from the Corporation.

(1) **Edinburgh Home for Mothers and Babies**, which during the year had 38 girls in residence, of whom 30 were new admissions, also 27 babies of whom 22 were admitted during the year. The average stay of the girls was just over 4 months. The average age of the babies on discharge was $3\frac{1}{2}$ months.

(2) **Bonnington Bank Home for Mothers and Infants**, on the 1st January had in residence 22 mothers (including expectant mothers) and 14 babies. During the year there were admitted 31 mothers and 28 babies and there passed out during the year 32 mothers and 29 babies. Twenty-one mothers and 13 babies were resident in the Home at the 1st of January 1931.

Treatment of cases suffering from debility and malnutrition is undertaken at **Victoria Park House**, where on 1st January 1930 there were 18 infants in residence. Added to this number there were admitted during the year 127 cases, making a total of 145 infants and children of pre-school age treated in 1930. The average daily occupation was 20.5 cases.

The Home for Babies at Polwarth Terrace, which receives an annual grant, had 14 infants in residence on the 1st January 1930, and during the year 12 new cases were admitted. The figures for the Anneve at Forbes Road were 6 and 10 respectively.

During the year 22 mothers, 15 infants, and 10 toddlers were sent and paid for by the Corporation to the **Duddingston Hawthorn Brae Convalescent Home** for mothers and nursing infants.

To **Humbie Children's Village** 168 toddler children between the ages of 3 and 5 years were sent during the year and remained for a period of between 3 and 4 weeks.

Leadburn Home for Tired Mothers and **Providence House, Kinghorn**, both accept cases recommended by the Department but receive no subsidy.

The Misses Romanes, who maintain a **Convalescent Home** at **Fushiebridge**, gave hospitality for two weeks each to several parties of mothers and children during the first three months of the year. In all, five parties, consisting of four mothers and six children were recommended by the Department, and I desire to take this opportunity of expressing gratitude for the very generous offer of free hospitality to a number of mothers who greatly benefited in health by the rest in the country.

Mothercraft Classes have again been held during the year with the usual successful results: 240 mothers attended the classes, of whom 98 entered the competition for the Hutchison Silver Shield for their respective Welfare Centres. This year the Shield was won by Mrs Paterson for Windsor Street Child Welfare Centre.

Home Helps.—These Home Helps serve a very useful purpose in suitable cases. They are available on application to the Child Welfare Department.

The Special Demonstrations in Cookery have again been given by Miss Gilmour with conspicuous success and benefit to those attending. This year classes were held at the following places:—Chessel's Court, High Street, Fishmarket Close, and Balgreen House.

Rheumatic Clinic.—A tentative scheme of notification of Rheumatism in childhood was started towards the end of February. A few weeks later, through the courtesy of the Directors of the Royal Hospital for Sick Children, a Rheumatic Clinic was inaugurated at the Hospital and has been held once a week. The three senior Physicians—Dr. McNeil, Dr. Carmichael and Dr. Thatcher were appointed to take

charge of the clinical work. Information is being gathered with the undernoted objects in view, but the scheme has not yet been sufficiently long in existence to justify tabulation and the drawing of definite conclusions. The number of attendances especially of re-visits is definitely on the increase, showing that the clinic is filling a very useful purpose. The number of notifications was 172. The number of new cases seen at the clinic for the first time was 85, and subsequent visits totalled 94.

The objects of the clinic are—

- (1) To verify the notified cases referred to the clinic.
- (2) To grade the patients according to their disability.
- (3) To keep them under periodic supervision (provided the medical attendant gives his consent to such supervision, or where the medical attendant thinks such supervision is advisable.)
- (4) To refer those requiring treatment either to their private practitioner or to the hospital or institution where they have been previously under treatment.
- (5) To estimate the number of cases requiring prolonged institutional treatment and the existing facilities for such treatment.

It is with gratitude that I offer my sincere thanks to the many workers—official and voluntary—whose help has been so valuable during the past year, and whose co-operation is so essential to the work of the Department.

I have, Sir, the honour to remain,

Your obedient Servant,

T. Y. FINLAY, M.D., F.R.C.P.E.

VENEREAL DISEASES.

REPORT BY CLINICAL MEDICAL OFFICER.

I have the honour to submit to you a Report of the work carried out under the Venereal Diseases Scheme during 1930.

During the year 5,503 new patients were examined at the following centres :—

New
Patients.

	Men.	Women and Children.	Total.
Royal Infirmary	2,308	890	3,198
Subsidiary Clinics	11	282	293
Bruntsfield Hospital and Elsie Inglis Hospital and Dispensaries ... ..	...	836	836
Royal Maternity Hospital ... ..	...	815	815
Seamen's Dispensary, Leith	361	...	361
Totals	2,680	2,823	5,503

These figures represent new cases only, the number of which shows a decrease of 410 from 1929. In addition to these new patients, 3,500 others, who at January 1st 1930 had not completed their treatment, continued to attend. During the year, therefore, 9,000 cases were under active treatment.

Of the 5,503 new patients reporting for diagnosis, 1,153 were proved to have syphilis; 1,740 suffered from gonorrhoea; 113 from soft sore; and 72 had mixed infection. In 2,425 patients the clinical condition suggested a possibility of disease, but no evidence of venereal disease was found after these patients were submitted to a series of tests over a period of time sufficiently prolonged to make certain that there was no venereal disease.

In-patient treatment was required in 503 cases; this number does not include In-patients. patients who were treated at the Maternity Hospitals. The total number of in-patients and the institutions in which they received treatment is indicated in the following Table :—

	Men.	Women and Children.	Total.
Royal Infirmary	228	137	365
Subsidiary Hospital . . . . .	...	138	138
Bruntsfield Hospital and Elsie Inglis Memorial Hospital . . . . .	...	223	223
Royal Maternity Hospital . . . . .	...	253	253
Totals	228	751	979

The number of attendances of out-patients was as follows :—

Out-patient
Attendances.

Royal Infirmary, Males	83,592
" " Females	22,425
Subsidiary Clinics	3,381
Bruntsfield Hospitals and Dispensaries	8,062
Royal Maternity Hospital	2,222
Seamen's Dispensary, Leith	13,666

The aggregate total of attendances was 133,348; 97,258 by male patients, and 36,090 by women and children.

There is an increase in the number of attendances although the number of patients shows a slight decrease. The two larger centres are the Male and Female Departments at the Royal Infirmary, and the average attendances each day at these centres were 267 for men and 85 for women and children.

If we consider the number of cases which, after tests of cure, are found not to be suffering from venereal disease, the increase in the attendance rate is very encouraging, because the former do not require to continue attending for nearly so long as those who suffer from active venereal disease.

It is interesting to compare the figures for 1920, the first full year in which the Venereal Diseases Scheme was in force, with those for 1930, ten years later ; they are as follows :—

Comparative
Figures of
New Patients
and Attend-
ances.

Year.	New Patients.	Attendances.
1920 . . .	3,383	73,032
1930	5,503	133,348

This does not necessarily indicate an increase in the number of patients who are suffering from venereal disease. Of the 5,503 new patients who reported in 1930, a considerable number had suffered from venereal disease and came to the clinic to have tests of cure, others had exposed themselves to the risk of venereal infection and desired abortive treatment, while others wished to be assured that they had not been infected. The fact that these patients came freely to the clinics is evidence of the confidence of the public in the work which is being done.

An analysis of the New Patients who suffered from active venereal disease gives the following result :—

Incidence and
Types of
Disease.

(1) Syphilis	37·5 per cent.
(2) Gonorrhœa	56·6 „
(3) Soft Sore	3·6 „
(4) Syphilis and Gonorrhœa	2·3 „

The corrected figure including group (4) is 39·8 per cent. syphilis, and 58·9 per cent. gonorrhœa.

It is generally agreed that gonorrhœa is at least four times as prevalent as syphilis ; it would appear, therefore, that the clinics are not treating approximately more than half of the gonorrhœa which exists in the community. A considerable number of the cases are being dealt with by private practitioners, but undoubtedly a number still remain untreated.

An analysis of the cases of syphilis in the Royal Infirmary during the year under review shows a slight decrease in the number seen in the early sero-negative stages ; 45 per cent. however, of the cases were in the primary or early generalisation stages. In 46 per cent. the infection was of longer duration or had been partially treated ; and in 11 per cent. of the cases the patients suffered from inherited syphilis.

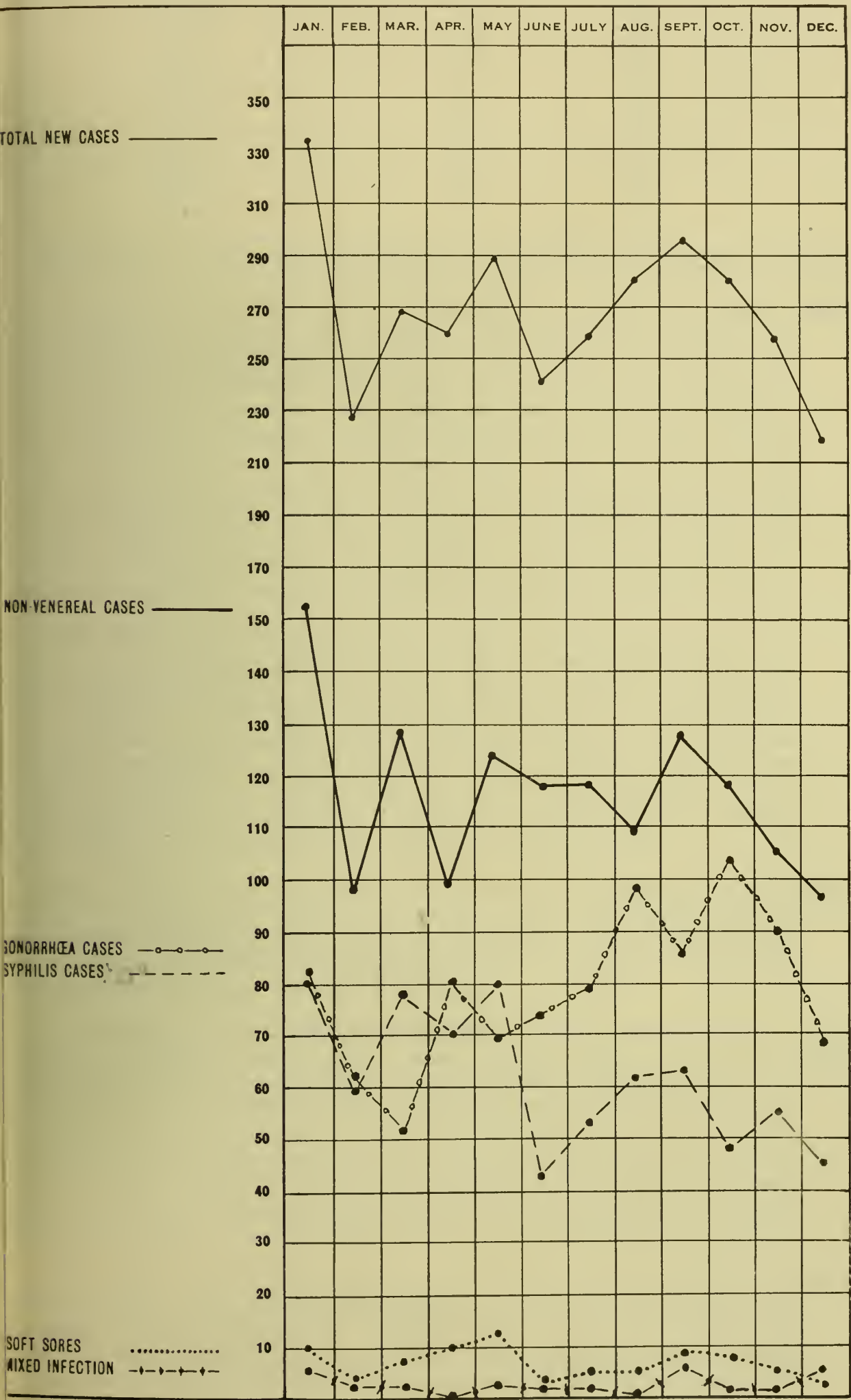
Acquired
Syphilis.

The decrease in the number of cases of inherited syphilis from 280 to 245 is proof of the value of the treatment which is being administered at the Antenatal Treatment Centres. There is no doubt that the pregnant mother who suffers from syphilis can have the health of her child safeguarded if she attends sufficiently early at the Antenatal Treatment Centres, and receives treatment continually throughout her pregnancy. There has been a progressive decrease in the number of cases of inherited syphilis under one year of age during the last five years, and the figures in the following Table show that inherited syphilis can be reduced in incidence and largely prevented by investigating the possibility of syphilitic infection of the mother at the antenatal examination and, if infection exists, by treating the patient intensively throughout the period of pregnancy.

Inherited
Syphilis.

COMPARATIVE INCIDENCE OF TYPES OF VENEREAL DISEASE

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



	Total Cases of inherited Syphilis.	Number under one year of age.
1921-22	518	167
1922-23	368	100
1923-24	599	129
1924-25	402	145
1925-26	590	180
1926-27	350	77
1927-28	496	96
1928-29	280	81
1929-30	245	82

The number of cases of gonococcal infection shows a slight increase from last year. Gonorrhoea.

This condition in newly-born children is generally the result of untreated gonococcal infection in the mother. The number of cases of ophthalmia notified to the Edinburgh Health Authority in 1930 was 21 ; 10 of these were treated in hospital, and 7 were proved, as a result of bacteriological tests, to be cases of gonococcal ophthalmia. There were 12 cases from other areas which were treated in hospital, making a total of 33 cases of ophthalmia neonatorum treated under the Venereal Diseases Scheme. Of the 22 cases treated in hospital, complete vision was restored except in the case of one child. In this case loss of vision in one eye resulted. This child was admitted to hospital 12 days after birth when the disease had been progressing for three or four days, and the eye was irreparably damaged before treatment was instituted. We have no doubt but that this child's eye could have been saved if the infant and its mother had been sent to hospital immediately after the infection started.

Ophthalmia
Neonatorum.

Every case of ophthalmia neonatorum must be looked on as an emergency in which there is grave risk to the eye, and immediate admission to a hospital, in which there are efficient facilities for treatment, is the only way to safeguard the sight of these children. We are not satisfied that the best results are being obtained in the prevention of blindness in children from this cause, and it is incumbent on every medical practitioner attending a confinement to see that prophylactic treatment of the eye is carried out personally by himself or is carefully supervised by him. The importance of efficient prophylaxis must also be impressed on all nurses and midwives during their training, if the incidence of gonococcal ophthalmia is to be appreciably lessened.

Cases of this type of gonococcal infection in young children numbered 22. Vulvovaginitis is one of the most intractable conditions to treat, and in-patient hospital treatment is always advisable because of the risk of infection to other children in schools and in over-crowded houses. The larger number of these cases result from female children sleeping in the same bed as an infected parent.

Vulvo-
Vaginitis.

The bacteriological and serological work entailed in dealing with the large amount of clinical material in the clinics has been carried out by Dr. Logan and his staff in the laboratory of the Royal Infirmary. The total number of specimens which were examined was 46,728, of which 6,931 were submitted from medical practitioners in Edinburgh and the Lothians and from outside institutions. A considerable number were also sent from the medical and surgical wards of the Royal Infirmary, and from clinics in the City working under the Venereal Diseases Scheme. As in previous years the standard of the work in the Royal Infirmary Laboratory has been consistently high, and this work is of inestimable value to the Venereal Diseases Service of the City.

Laboratory
Work for
Diagnosis and
Tests of Cure.

There have been few advances in the treatment of systemic syphilis during the past year. Many of the recent methods suggested for dealing with intractable cases have been tried with varying success. Salvarsan and its substitutes and bismuth and mercury are still the main drugs in use. In reviewing the cases of syphilis treated during the past 10 years, it is interesting to note that in only one patient has there been a

Treatment.

neuro-recurrence of syphilitic disease where the treatment recommended by the medical staff had been carried out. When we consider that 80 per cent. of all the cases of syphilis continue with their treatment for a period of two years or more, and pass tests which are accepted as a high standard of cure, there is no doubt that in the course of time the incidence of syphilis, and of the later manifestations of syphilis, will be appreciably reduced. In the treatment of cases of syphilis of the nervous system, intravenous injections of tryparsamide have continued to be employed, and, the more the drug is used in these cases, the more striking are the results. Malarial treatment has also been employed with promising results. Of the 45 cases of general paralysis of the insane treated by this method, in over 30 per cent. the patients are well, both physically and mentally, and are at work.

The incidence of intolerance to treatment by intensive intravenous or intramuscular injections is remarkably low considering the quantity of these drugs which has been administered to individual patients.

In the treatment of gonorrhœa the intravenous injection of calcium gluconate and calcium chloride is giving promising results in epididymitis and other complications of gonorrhœa. Diathermy is being used to a considerable extent in the complications of gonorrhœa and is proving helpful in relieving pain, especially in conditions such as arthritis.

During the year 3,943 patients were discharged after undergoing tests of cure; 1,122 patients were transferred to other centres, and approximately 3,500 patients were still under treatment at the end of the year.

The most difficult part of the work associated with a venereal diseases service is to impress on the patients the importance of continuing with treatment until they can be given a definite assurance of cure. In the year under review 80 per cent. of the patients were treated and cured, and the defaulter rate, 20 per cent., has been progressively reduced. This percentage figure represents 693 patients, many of whom are still infective, and we are not any nearer to a solution of the problem of dealing with these infected people.

Every attempt is made by the staff to get into touch with the infected defaulters and to induce them to return for treatment. This follow-up work is attended with great difficulty, and under present conditions it is impossible to get the best results so far as the prevention of disease is concerned. It is much more difficult to follow up male than female patients; the latter can be visited during the day by a member of the departmental staff; male patients are to a large extent only available in the evenings, and a visit at this time would almost certainly lead to exposure of the individual.

During the year the names of 801 patients who had ceased attending before they were cured were referred to the Visiting Nurse to following up and investigate the reason for their non-attendance. The larger number of these were female patients. Some were written to, others were visited. In the large area covered by the Scheme it is difficult to visit all the cases. Of the 801 defaulters, 649, *i.e.*, 81 per cent., returned to the clinics to resume treatment. It was impossible to trace 97 of the patients, and 55 who were traced refused to return for treatment. This last group of patients is very difficult to handle because, although they are suffering from venereal disease, and are infectious, many of them may not suffer any pain or discomfort. They are, in general, careless and inconsiderate and do not worry as to whether they are responsible for spreading disease.

The system of following up patients who have attended the antenatal centre at the Royal Maternity Hospital is proving effective. The mother is asked to report back to the same hospital about a month after her confinement in order that her post-natal condition may be investigated. If the venereal disease for which she was treated ante-

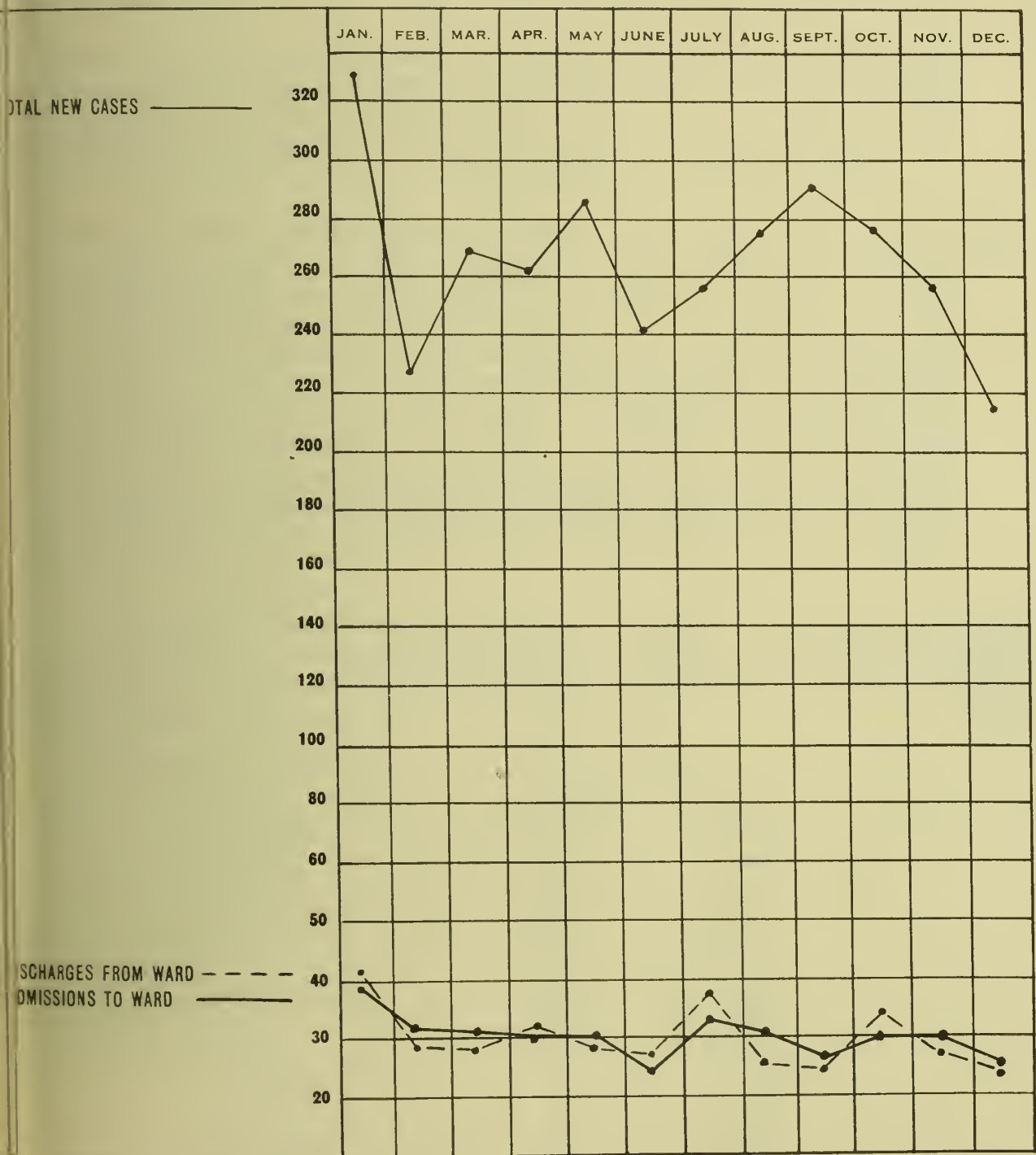
End Results
of Treatment.
Discharges
and
Transfers.

Percentage
continuing at
treatment
until
considered
cured.

Follow-up
work.

NUMBER OF NEW PATIENTS AND PROPORTION REQUIRING
IN-PATIENT TREATMENT

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



naturally is not cured, arrangements are made for her to attend at one or other of the various centres in the City most convenient to her home. The Visiting Nurse learns, through the Central Office, of the arrangements made, and if the patient does not report at the prearranged centre she is visited in her home within a few days. In this way the infected mother is kept continuously at treatment with a view to safeguarding her own health and that of future children.

In her follow-up work the Visiting Nurse has received all possible assistance from the Almoners of the Royal Infirmary, from other social workers in the City, and from the staff of the Public Assistance Department

The nurse's work consists of visits to homes, writing to and interviewing patients, and the total number of visits to homes amounted to 2,516 in the course of the year.

There is no doubt that this follow-up work is proving of immense value to the scheme in getting patients to continue with treatment and has reduced the defaulter rate appreciably. It should be continued and extended, and if, in conjunction with it, there was evolved some further method of control of the infected patient by the Health Authority the defaulter rate could be reduced to a negligible quantity.

The most difficult problem which those dealing with venereal disease are faced with, is that of the infected single girl. There is no suitable Hostel Accommodation in Edinburgh for girls who require prolonged supervision and treatment; further, under existing conditions there is very little provision for giving these girls a fresh start in life when they are cured. Many of them are the victims of circumstances, others are of impaired mentality. Until satisfactory Hostel accommodation is available under the Venereal Diseases Scheme, the major number of these girls, being employable but unemployed, tend to revert to their former habits, and nothing practical can be attempted to reform their moral character and alter their outlook on life. In the short time they are in hospital, very little can be done in this direction, and the stimulation of more interest in this problem by representatives of Social and Religious bodies is urgently required.

This Dispensary is for the treatment of seamen and others in Leith. The number of patients has steadily increased since the centre was opened, and considering that the patients are in many cases of the migratory type, the increase in the attendance rate from 12,847 to 13,666 must be considered satisfactory.

Hostel
Accommod-
ation.

Seamen's
Dispensary
Leith.
Treatment
of the
Mercantile
Marine.

The following is a detail of the work done during the year :—

Month.	New Patients.	Attendances.
January	43	1,295
February	33	902
March	32	1,185
April	33	1,373
May	22	1,324
June	26	759
July	25	847
August	26	1,036
September	28	1,171
October	26	1,074
November	30	1,453
December	37	1,247
Totals	<u>361</u>	<u>13,666</u>

If this dispensary were attached to a general hospital, its usefulness would be greatly increased, and it would be utilised by the public to a larger extent.

Treatment
Centre.
Royal Blind
School.

Since 1928 a large number of the inmates of this school have been examined to ascertain if their deformity was due to inherited disease. As a result of this investigation, children, in whom the Wassermann test was found to be positive, or in whom there was clinical evidence of disease, are receiving treatment weekly. In addition, all new entrants to the School are investigated. During the year 1930, 10 per cent. of these new admissions were found to have evidence of inherited disease. A total number of 161 children have now been examined in this school and treatment is being administered to those in whom there is evidence of infection. As in previous years the Managers and the Superintendent of the Institution have given all possible assistance in investigating the causes of blindness in the pupils, and they are satisfied that those under treatment are obtaining benefit from it.

Co-operation
with other
Hospital
Departments.

The work in the clinics at the Royal Infirmary and elsewhere has benefited greatly from the advice and help of the medical staff of other departments in the Infirmary. Many of the cases of venereal disease suffer from complications such as diseases of the eye, ear, heart, and nervous system, and the possibility of consultation with experts on these subjects, without cost to the City, is of enormous benefit to the Scheme and contributes largely to its success.

The work of the X-Ray Department is a further benefit to the clinics. In the case of female patients many of the pelvic conditions to which venereal disease gives rise, need gynæcological treatment, and this is readily available in the same institution. There is no doubt of the fact that the location of the two larger clinics inside the walls of the Royal Infirmary is of the greatest assistance to those treating these patients, is in the best interests of the patients, and is, in addition, of definite value to the Health Authority in that a considerable number of cases of active venereal disease are discovered in other wards of the hospital, and are transferred to the Venereal Diseases Department for treatment.

As we have stated in previous reports, it is unfair to label many of the patients who come under treatment, and especially female patients, as cases of acquired venereal disease when their infection has been quite innocent. We have always urged that it should be possible to treat such cases in association with a gynæcological department, and, in the case of pregnant women, in the antenatal out-patient and in-patient departments of a Maternity Hospital. In any future development of the hospital policy of the Local Authority provision should be made to treat mothers and children under such conditions as will avoid any stigma or slur being conveyed to the mother or her children.

Diagrams
and Tables.

Diagrams and Tables are attached to this report which indicate the number of individuals who have been treated as in-patients, the attendance rate at the centres in the Royal Infirmary, the various types of infection, and its seasonal incidence.

In submitting this report I wish to acknowledge and to bring to your notice the services of the medical, nursing, and clerical members of my staff. Their work is arduous and the conditions under which it is carried out are often trying. In overtaking the volume of the work which is seen in the accompanying Tables much has been done to prevent the spread of infective disease and to cure existing disease; every member of the staff has contributed to these results and to them is due in large measure the success which has been attained.

DAVID LEES, D.S.O., M.A., M.B., D.P.H., F.R.C.S., F.R.C.P.(E).
Clinical Medical Officer, Edinburgh Corporation Venereal Diseases Scheme.

EDINBURGH CORPORATION VENEREAL DISEASES SCHEME.

ROYAL INFIRMARY CLINIC.

REPORT FOR THE YEAR ENDING 31ST DECEMBER 1930.

Number of New Cases Attending :—

	EDINBURGH.		OTHER AREAS IN SCHEME.		OTHER AREAS OUTSIDE SCHEME.		AREAS OUTSIDE SCOTLAND.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
January . . .	159	61	46	19	32	12	1	...
February . . .	115	39	26	6	35	8	...	...
March . . .	145	43	34	15	23	9	...	...
April . . .	132	53	30	14	17	15	...	...
May . . .	143	40	34	15	36	18	3	...
June . . .	116	58	26	9	20	6	5	...
July . . .	141	41	22	14	24	13	3	...
August . . .	131	54	26	17	28	14	5	...
September . . .	158	53	31	16	16	14	4	...
October . . .	151	49	23	10	22	20	4	...
November . . .	126	56	29	13	21	12	2	...
December . . .	119	42	26	7	14	5	4	...
Totals . . .	1636	589=2225	353	155=508	288	146=434	31	...=31

EDINBURGH	2225
Other Areas in Scheme	508
Other Areas outside Scheme	434
Areas outside Scotland	31

Grand Total 3198

Of the New Cases Attending there were :—

EDINBURGH.

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
January . . .	36	38	5	5	75	21	13	1	26	
February . . .	27	34	1	2	51	16	7	1	15	
March . . .	38	29	6	1	71	12	7	1	23	
April . . .	25	43	8	1	55	24	12	...	17	
May . . .	38	35	7	...	63	12	9	2	17	
June . . .	13	47	3	...	53	15	6	...	37	
July . . .	24	50	5	1	61	13	9	1	18	
August . . .	18	58	2	1	52	18	12	...	24	
September . . .	28	60	6	4	60	16	6	...	31	
October . . .	24	68	8	...	51	12	10	...	27	
November . . .	27	52	3	2	42	17	11	...	28	
December . . .	23	44	1	1	50	15	9	...	18	
Totals . . .	321	558	55	18	684	191	111	6	281	

OTHER AREAS IN SCHEME.

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
January . . .	7	13	4	...	22	6	4	...	9	
February . . .	3	10	2	1	10	...	2	...	4	
March . . .	7	8	1	...	18	6	3	...	6	
April . . .	6	15	2	...	7	4	3	...	7	
May . . .	7	7	3	1	16	5	2	...	8	
June . . .	5	13	...	1	7	3	...	...	6	
July . . .	3	8	...	...	11	4	3	...	7	
August . . .	6	12	...	...	8	4	2	...	11	
September . . .	5	11	2	2	11	6	2	...	8	
October . . .	3	9	...	1	10	2	1	...	7	
November . . .	5	11	2	...	11	2	4	...	7	
December . . .	1	8	1	2	14	2	...	1	4	
Totals . . .	58	125	17	8	145	44	26	1	84	

OTHER AREAS OUTSIDE SCHEME.

MALES.						FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
January . .	8	11	...	...	13	3	2	...	7
February . .	12	8	1	...	14	2	2	...	4	
March . .	10	4	...	1	8	5	2	...	2	
April . .	4	7	...	...	6	7	1	...	7
May . .	12	13	2	1	8	4	2	...	12	
June . .	5	4	...	1	10	1	2	...	3	
July . .	5	5	...	...	14	5	3	...	5
August . .	10	8	1	...	9	5	5	...	4	
September .	3	4	1	...	8	3	1	...	10	
October . .	5	9	...	...	8	1	4	...	15
November .	3	8	1	...	9	1	4	...	7	
December .	4	2	1	...	7	...	2	...	3	
<hr/>										
Totals . .	81	83	7	3	114	37	30	...	79	

AREAS OUTSIDE SCOTLAND.

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
January . . .	...	...	1	...	...	...	...	...	...
February . . .	...	...	...	...	...	...	...	...	...
March . . .	...	...	...	...	...	...	...	...	...
April . . .	...	...	...	...	...	...	...	...	...
May . . .	2	1	...	...	...	...	...	...	...
June . . .	1	2	...	...	2	...	...	...	...
July . . .	...	1	...	...	2	...	...	...	...
August . . .	...	2	2	...	1	...	...	...	...
September . . .	1	3	...	...	...	...	...	...	...
October . . .	1	3	...	...	...	...	...	...	...
November . . .	...	...	...	...	2	...	...	...	...
December . . .	1	3	...	...	...	...	...	...	...
Totals . . .	6	15	3	...	7	...	...	...	...
Grand Total . . .	466	781	82	29	950	272	167	7	444	
	2308					890				

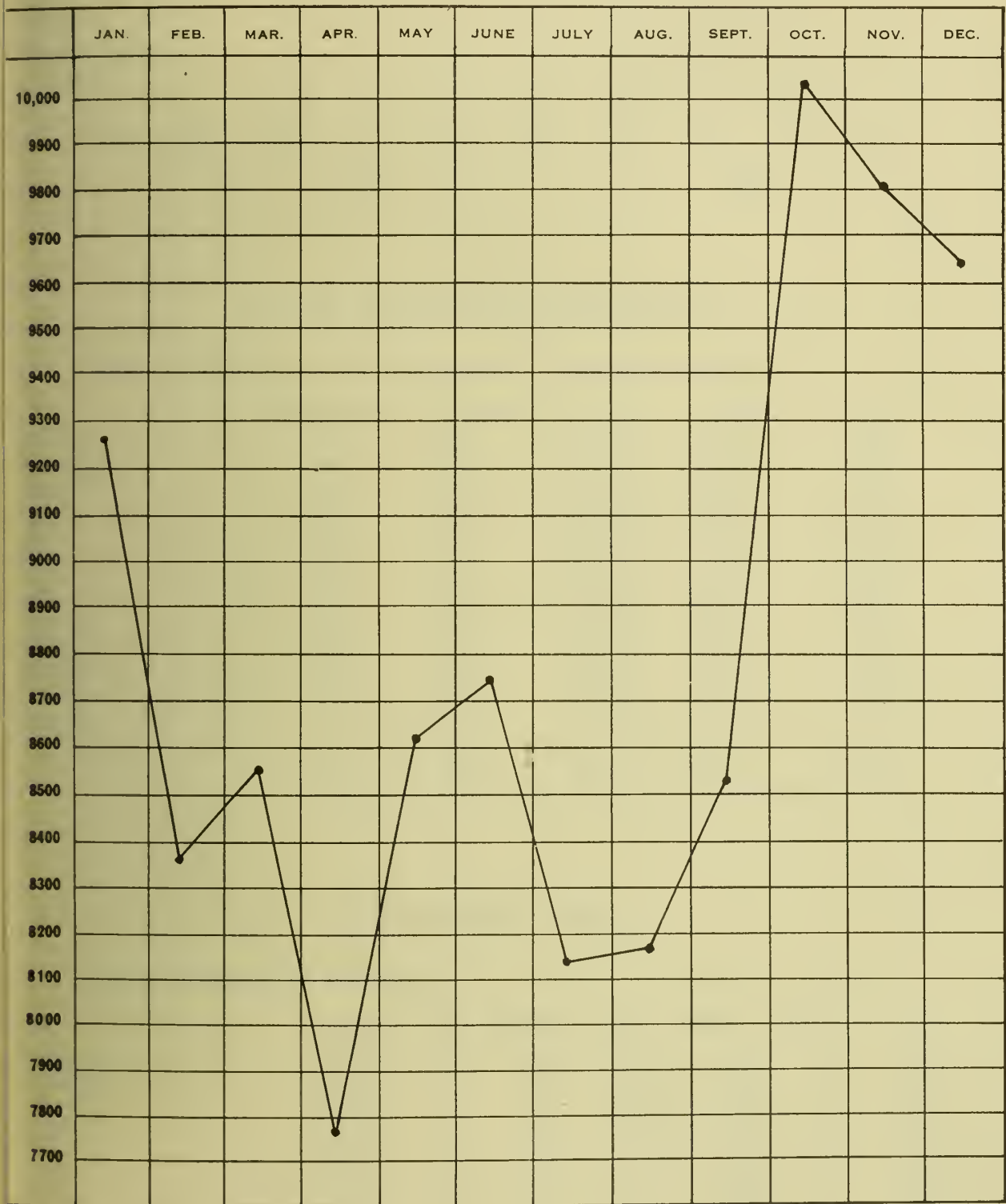
AGE PERIODS.

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
Under 1 yr.	. ...	...	...	...	...	4	3	...	32
1-5 yrs.	. ...	...	...	...	1	2	3	...	36
5-15 yrs.	. 14	...	...	...	8	26	7	...	73
15-25 yrs.	. 80	248	27	6	256	61	71	4	119	
25 yrs. up	. 372	533	55	23	685	179	83	3	184	
<hr/>										
Totals	. 466	781	82	29	950	272	167	7	444	

Admissions to Hospital:—

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
Edinburgh .	43	51	3	2	9	38	23	4	7	
Other Areas in Scheme .	17	20	3	2	6	12	7	...	1	
Areas outside Scheme .	23	31	2	1	6	27	17	...	1	
Areas outside Scotland .	1	4	2	...	2	...	...	...	...
Totals .	84	106	10	5	23	77	47	4	9	
	228					137				

CHART SHOWING MONTHLY ATTENDANCES
(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



Discharges from Hospital:—

	MALES.					FEMALES.				
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.	
Edinburgh .	48	45	3	2	10	40	17	5	8	
Other Areas in Scheme .	19	19	3	1	7	13	8	...	1	
Areas outside Scheme .	23	30	2	...	4	23	18	...	2	
Areas outside Scotland .	...	3	2	1	2	...	...	...	...
Totals .	90	97	10	4	23	76	43	5	11	
	<u>224</u>					<u>135</u>				

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given:—

	Neokharsivan.	Sulfarsenol.	Bismuth.	Other Drugs.	Total.
January	913	713	2,298	1,034	4,958
February	850	683	2,141	920	4,594
March	892	780	2,328	1,075	5,075
April	920	715	2,372	1,220	5,227
May	956	701	2,335	1,193	5,185
June	692	546	2,089	940	4,267
July	606	511	1,982	1,033	4,132
August	634	523	1,968	1,127	4,252
September	669	539	1,996	1,068	4,272
October	756	673	2,320	1,036	4,785
November	797	571	2,236	1,020	4,624
December	775	539	2,184	955	4,453
	9,460	7,494	26,249	12,621	55,824

PATHOLOGICAL WORK.

Number of Specimens examined:—

	Wass.	C.S.F.	G.C.F.T.	D.Gs.	Smears.	Others.	Total
January	1,546	50	355	124	950	10	3,035
February	1,154	48	240	108	790	10	2,350
March	1,252	57	282	106	857	3	2,557
April	1,468	26	295	84	884	9	2,766
May	1,115	33	275	120	700	7	2,250
June	1,019	18	198	30	839	4	2,108
July	944	31	198	50	866	4	2,093
August	669	30	162	84	886	12	1,843
September	1,198	24	250	84	822	4	2,382
October	1,230	39	273	80	935	2	2,559
November	979	35	215	64	852	2	2,147
December	1,179	28	299	32	1,064	12	2,614
	13,753	419	3,042	966	10,445	79	28,704

Total Attendances at the Clinic for Routine Dressings, etc. :—

	Males.	Females.	Total.
January	7,236	2,035	9,271
February	6,440	1,916	8,356
March	6,457	2,115	8,572
April	5,848	1,919	7,767
May	6,561	2,050	8,611
June	6,936	1,805	8,741
July	6,483	1,657	8,140
August	6,496	1,678	8,174
September	6,719	1,806	8,525
October	8,470	1,933	10,403
November	8,003	1,801	9,804
December	7,943	1,710	9,653
	83,592	22,425	106,017

OTHER TREATMENT CENTRES IN EDINBURGH.

1. Subsidiary Centres for Royal Infirmary.

Number of New Cases					293
Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.		
93	56	3	141	=293	
Number of Patients treated in Hospital					138
Total Attendances of Out-patients					3381
Pathological Work—Number of specimens examined					2094
Special Treatment administered—Number of Injections given					4592

2. Hospital for Women and Children and Subsidiary Centres.

Number of New Cases					836
Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.		
86	331	22	397	=836	
Number of Patients treated in Hospital					223
Total Attendances of Out-patients					8062
Pathological Work—Number of specimens examined					4922
Special Treatment administered—Number of Injections given					3356

3. Royal Maternity Hospital.

Number of New Cases					815
Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.		
172	271	6	366	=815	
Number of Patients treated in Hospital					253
Total Attendances of Out-patients					2222
Pathological Work—Number of Specimens examined					2280
Special Treatment administered—Number of Injections given					748

4. Seamen's Dispensary, Leith.

Number of New Cases					361
Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Infection.	No. V.D.	
64	134	31	5	127	=361
Total Attendances of Out-patients					13,666
Pathological Work—Number of specimens examined					1797
Special Treatment administered—Number of Injections given					2296

DAVID LEES, D.S.O., M.A., M.B., D.P.H., F.R.C.S., F.R.C.P.(E.),
Clinical Medical Officer, Edinburgh Corporation V.D. Scheme.

TREATMENT OF SICK POOR.

Under the Local Government (Scotland) Act, 1929, the responsibility for the treatment of poor sick persons was transferred from the Parish Council to the Public Health Department of the Corporation. Pilton Hospital had already, by arrangement with the Parish Council, been utilised for that purpose, and Craigleith Hospital came under Public Health control at 16th May. The Hospitals at Craiglockhart and Seafield Institutions remain for the present under the care of the Public Assistance Committee pending the completion of arrangements to administer the two sides of the institutions separately.

The following reports relating to Craigleith Hospital and Pilton Hospital have been prepared by the Medical Superintendent, who also superintends the Hospital cases at Craiglockhart and Seafield.

Craigleith Hospital.—Since this Hospital was reconstructed and opened for work, the pressure on the accommodation for patients in Craiglockhart and Seafield Hospitals has been markedly relieved.

There have been no alterations or additions made to the Hospital during the period from 1st June to 31st December 1930.

Many letters of thanks have been received from patients or their relatives which show that the treatment given to sick persons in this Hospital has been appreciated.

The months of January, February, March, April and May always put a maximum strain on the resources of all the institutions lately under the Edinburgh Parish Council. It is not only the period of maximum incidence of disease among the City's population, but also the period when we have the greatest incidence of sickness amongst the staff of the Hospital. This period is not now under review.

Although the Hospital is well equipped for the treatment of acute cases of disease, it has not been possible to transfer all the acute cases from Craiglockhart or Seafield Hospitals. If it could be found possible to arrange for such cases to be admitted direct to Craigleith Hospital, greater efficiency medically would result.

STATISTICS FOR CRAIGLEITH HOSPITAL, 1st JUNE to 31st DECEMBER 1930.

										Total.	
Admissions	.	.	.	Adults—Male	39	{	139	}	569		
					—Female					100	
					Children	—Male	241			{	430
						—Female	189				
Discharges	.	.	.	Adults—Male	35	{	115	}	474		
					—Female					80	
					Children—Male	205	{			359	
						—Female					154
Deaths	.	.	.	Adults	.	.	.	21	{	43	
					Children	.	.	.			22
Remaining in Hospital at 31st December 1930	.	.	.	Adults	.	.	.	103	{	227	
					Children	.	.	.			124
Number of Cases treated										744	

Hospital treatment was necessary on account of disease in all cases admitted except for infants and very young children, 30 per cent. of whom were healthy. The patients treated were chiefly medical cases, all major surgery being carried out at Craiglockhart Hospital.

TABLE SHOWING THE RESULTS OF TREATMENT OR TERMINATION OF ILLNESS.

1. Cured	.	.	.	.	.	124
2. Improved	.	.	.	.	.	56
3. Not improved	.	.	.	.	.	294
4. Died	.	.	.	.	.	43
5. Remaining under treatment	.	.	.	.	.	227
— Total						744

As will be seen, one-third of the patients have been cured or improved. Many of the patients were senile chronic medical cases or healthy children.

CAUSES OF DEATH.

	Adults.	Children.
Diseases of Lungs	2	6
„ Heart and Blood Vessels	5	—
„ Kidney	3	—
„ Brain and Nerves	2	2
„ Digestive Organs	3	—

Cancer tumours caused 4 deaths, senility 2 deaths, and among children, congenital disabilities accounted for 14 deaths.

Total beds	258
Average number of occupied beds	232
Average cost per day, foodstuffs only	10½d.
Average total cost per occupied bed per day	5/8½d.
Average length of stay, in days, per patient	31

MINOR SURGERY.

Minor operations, 6—Removal of tonsils and adenoids.

Minor operations without anæsthetic not included in Report.

DENTAL DEPARTMENT.—Patients treated, 64. These include 52 children and 12 adults.

MATERNITY DEPARTMENT.—Total admissions . 44

Discharges . . 35

Deliveries . . 35—31 normal.

2 abnormal.

2 premature.

Post-partum puerperal admissions . . 4

There have been no deaths, nor any cases of puerperal sepsis during the period.

SPECIAL DIET DEPARTMENT.—Admissions	22
Discharges	12

Of these patients, 2 were cured, 8 greatly improved, 1 condition stationary, and 1 died. 12 patients remain under treatment.

Of the total cases, 50 per cent. were treated for diabetes.

A Follow-Up Department, which patients might attend as out-patients, for advice on their diets, if it could be arranged, would greatly shorten the length of stay of such patients in Hospital.

MASSAGE AND ELECTRO-THERAPY DEPARTMENT.—During the period, 704 treatments were given. Of these 664 were treatments by massage, galvanism, etc., and 40 by ultra violet artificial sunlight.

East Pilton Hospital.—On 1st June 1930, 100 beds in this Hospital were in use as an annexe of Craigleith Hospital. These beds were reserved for female medical cases of the more chronic type.

These elderly patients have greatly enjoyed the freedom of the ground floor Wards, which enables them to get out of doors so readily during the summer.

Total under treatment at 1st June 1930	98
Admissions, 1st June to 31st December 1930	21
Discharges 11; deaths, 13	24
Total remaining under treatment at 31st December 1930 . .	95
Number of patients treated	119

Result of Treatment or Termination of Illness:—

Cured	Nil.
Improved	11
Died	13
Remaining under treatment . .	95
— Total	119

CAUSES OF DEATH.—In 7 of the 13 deaths, the primary cause of death was senility.

Senility—with diseased heart, etc. .	7
Cancer, or other tumour . .	3
Cerebral Hæmorrhage . .	2
Disease of Kidney . .	1

MENTAL HEALTH SERVICES.

Under the operation of the Local Government (Scotland) Act, 1929, the supervision of Mental Health Services was transferred to the Town Council and are now administered by the Public Health Department. The two institutions involved are Bangour Mental Hospital and Gogarburn Certified Institution and reports relating to these are subjoined.

BANGOUR MENTAL HOSPITAL.

The following is a summary of the Report submitted by the Medical Superintendent.

GENERAL STATISTICS.

On 1st January 1930 there were on the Register the names of 1,001 patients, of whom 503 were men and 498 were women.

There were admitted during the year 367 patients—193 men and 174 women.

There were discharged 233 patients—122 men and 111 women.

The deaths numbered 87—49 men and 38 women.

The total number of patients under treatment was 1,368—696 men and 672 women.

The average daily number of patients on the Register during the year was 1,031—515 men and 516 women.

During the period 1st June 1904, when Bangour Village was opened for the reception of patients, to 31st December 1930, 5,953 patients (of whom 2,885 were men and 3,068 were women), were admitted, 3,384 (of whom 1,581 were men and 1,803 were women), were discharged, and 1,521 (of whom 779 were men and 742 were women) died, leaving on the Register at 31st December 1930, 1,048 patients, of whom 525 were men and 523 were women.

The following statement shows in more detail the changes in the population of the Village that took place during the year 1930 :—

				Males.	Females.	TOTAL
On the Register at 1st January 1930 . . . . .	.	.	.	503	498	1,001
Cases admitted—	M.	F.	TOTAL.			
For the first time	138	126	264			
Re-admissions	55	48	103			
Total cases admitted during the year				193	174	367
Total number under treatment				696	672	1,368
Cases discharged and died—	M.	F.	TOTAL.			
Discharged recovered	71	76	147			
Discharged unrecovered	51	35	86			
Died	49	38	87			
Total cases discharged and died during the year				171	149	320
Remaining on the Register 31st December 1930				525	523	1,048

Being an increase of 22 in the number of male patients, an increase of 25 in the number of female patients, and an increase of 47 in the total number of patients, during the year.

MEDICAL STATISTICS.

The Admissions.—The number of cases admitted during the year was 367—males 193 and females 174. Eighty-eight of these, or 24 per cent. were voluntary patients. The number of admissions in each of the five years 1926-1930 is shown below :—

Year.	Number of Admissions.
1926	312
1927	297
1928	343
1929	382
1930	367

The average daily number of patients resident in the Hospital in each of the five years 1926-1930 is also shown :—

Year.	Average daily number resident.
1926	960
1927	951
1928	960
1929	982
1930	1,031

So that the tendency is for the number of patients resident in the Hospital to increase and in 1930 it reached the four figures for the first time in the history of the Institution.

Granted that a gradual accumulation of such cases in mental hospitals is inevitable, it is likely that the rate of increase could be retarded, at least at Bangour, by the establishment in Edinburgh of facilities for the treatment, not only of cases of mental disorders from the earliest appearance of the symptoms, but also for cases of the functional types of nervous illness which untreated, are apt to drift along until a complete breakdown takes place with symptoms of mental illness. These nervous illnesses are often preventable, and in many cases curable. Untreated, they are apt to drift into insanity.

The establishment of a nervous and mental clinic, with an active social service department attached and with wards in one of the hospitals, would restore many to health who, without such provision, drift to the special hospital for mental cases.

Origin.—The following statement shows the places of origin of the 367 patients admitted during the year :—

	Males.	Females.	Total.
Admitted direct from their homes	79	99	178
From Edinburgh Royal Infirmary	31	26	57
„ other General Hospitals	7	6	13
„ „ Mental Hospitals	9	10	19
„ Public Assistance Institutions	28	14	42
„ Police Office or Prison	24	3	27
„ Colony of Mercy, Bridge of Weir	1	...	1
„ St. Joseph's Home, Edinburgh	2	...	2
„ Maternity Hospital, Edinburgh . . . . .	...	1	1
„ Lunatic Wards of Poorhouses	4	3	7
„ Lunatic Departments H.M. Prison, Perth	1	...	1
Return of boarded out patients	7	12	19
	193	174	367

Patients returned from Country Board.—It is noteworthy that the unusually large number of 19 patients—7 men and 12 women—who had been “boarded out,” in private dwellings with guardians unrelated to them, were transferred back to the Mental Hospital during the year. An analysis of these cases shows that in 10 instances—4 men and 6 women—the patients had become unfit for private care owing to the recurrence of mental symptoms of a troublesome nature; in 7 instances—2 men and 5 women—the patients required hospital nursing owing to acute physical illness or increasing frailty, and in 2 instances—1 man and 1 woman—the patients were returned to the hospital for treatment by operation.

Age.—The average age of the patients admitted was in the case of males 44·2, in the case of females 46·7, and of both sexes 45·4 years. The youngest male patient received was a boy of 13 years and the oldest a man of 78. The youngest female was a girl of 17 and the oldest a woman of 83 years. Fourteen of those admitted were under 20, 141 were over 50, 73 were over 60, 30 were over 70, and 10 were over 80 years of age. Of the 1048 patients in the Hospital at the close of the year the average age in the case of men was 52·8, in the case of women 47·7, and of both sexes combined 50·3 years.

Civil State.—Of the 367 patients admitted during the year, 171 (94 males and 77 females) were unmarried persons; 151 (80 males and 71 females) were married, and 45 (19 males and 26 females) were widowed.

General bodily health and condition.—There is no clear demarcation between mental and physical illness. So it is not surprising that a large proportion of the patients received are in an enfeebled state of bodily health.

	Males.	Females.	Total.
Admitted in fair or average physical condition .	73	33	106
In poor or indifferent physical condition .	77	86	163
In weak or very weak and exhausted condition .	43	55	98
	193	174	367

Forms of Mental Disorders.—The forms of mental disorder on admission under which were classified the cases received during the year are shown in the following Table :—

	Males.	Females.	Total.
Melancholia	62	68	130
Mania	16	20	36
Confusional and Delirious states	18	8	26
Delusional and Hallucinatory states	29	17	46
General Paralysis	7	1	8
Insanity with Epilepsy	10	6	16
Post-Encephalitic states	2	1	3
Dementia, Primary	22	11	33
Dementia, Secondary	8	16	24
Dementia, Organic	2	4	6
Dementia, Senile	11	12	23
Amentia—With Epilepsy . . . . .	...	...	...
„ Without Epilepsy	6	10	16
Totals	193	174	367

Causes of Mental Disorder.—In the cases admitted the causes of the mental attacks, operating in association with inherited or acquired mental instability, were, so far as could be ascertained, the following :—

	Males.	Females.	Total.
Heredity	38	33	71
Critical Periods of Life (Puberty and Adolescence ; Climacteric ; Senility)	39	28	67
Mental Stress (Worry ; Anxiety ; Grief ; Unemployment ; Privation)	20	24	44
Toxic Causes (Alcoholism ; Influenza ; Tuberculosis ; Syphilis ; Sepsis)	60	19	79
Encephalitis lethargica	3	1	4
Reproduction (Pregnancy ; Child-birth ; Lactation) . . . . .	...	2	2
Traumatic (Injuries, Operations, etc.) . . . . .	...	...	...
Impaired Health from disease of bodily Organs	21	25	46
Epilepsy	10	6	16
Congenital defect	6	10	16
Other causes and unknown	9	9	18

Previous Attacks.—Of the patients admitted during the year, 39 males, or 20·2 per cent., and 43 females, or 24·7 per cent., were stated to have had one or more previous attacks of mental disorder.

The Discharges.—Recoveries.—The patients discharged during the year numbered 233—122 men and 111 women, and of these there were 147—71 men and 76 women who had recovered. The percentage of cases discharged as recovered on the total number admitted was for male patients 36·8, for female patients 43·7, for both sexes 40·0. The percentage of cases discharged as recovered calculated on the direct admissions only, *i.e.*, excluding cases transferred from the other Mental Hospitals, was for males 38·5, for females 46·3, and for both sexes 42·2.

The length of residence in the Hospital of the patients who were discharged as recovered during the year is shown in the following Table :—

	Males.	Females.	Total.
Under 1 month	13	5	18
From 1 to 3 months	30	22	52
" 3 " 6 "	16	23	39
" 6 " 9 "	5	7	12
" 9 " 12 " . . . . .	...	7	7
" 1 " 2 years	4	9	13
" 2 " 3 " . . . . .	...	2	2
" 3 " 4 " . . . . .	...	...	...
" 4 " 5 "	2	1	3
" 5 " 6 " . . . . .	...	...	...
" 6 " 7 " . . . . .	...	...	...
" 7 " 8 "	1	...	1
	<hr/> 71	<hr/> 76	<hr/> 147

It will be observed that 70, or 47·6 per cent. of the recoveries took place within three months, 109 or 74·1 per cent. with six months, and 121 or 82·3 per cent. within nine months of admission. Nothing could more strongly emphasise the advantage of early treatment in cases of mental disorder.

Discharged unrecovered.—The patients discharged as "unrecovered" during the year numbered 86—51 men and 35 women. Of these there were 67—37 men and 30 women—who were classified as "relieved," and there were 19—14 men and 5 women—who were classified as "not improved." The percentage of cases discharged as "relieved" calculated on the direct admissions, was in the case of males 20·1, and in the case of females 18·2, and for both sexes 19·2. The percentage of cases discharged as recovered and relieved taken together, on the direct admissions was for males 58·1, for females 64·6, and for both sexes 61·4.

The following Table shows how the patients who were discharged although not recovered were disposed of:—

	Males.	Females.	Total.
“Boarded out” in private dwellings . . .	6	8	14
Boarded in mental wards of Poorhouses . . .	8	3	11
Transferred to other Mental Hospitals . . .	11	9	20
Discharged to care of relatives . . .	5	5	10
Discharged by escape . . .	2	1	3
Voluntary Patients discharged . . .	19	9	28
Totals . . .	51	35	86

The Deaths.—The deaths which occurred in 1930 numbered 87—49 men and 38 women—and they were all from natural causes. In 42 instances, or 48·3 per cent., the causes of death as certified were confirmed by post-mortem examination.

The average age at death was in the case of male patients 60·9 years, in the case of females 59·5 years, and for both sexes 60·3 years.

The percentage of deaths, calculated on the average number resident was in the case of male patients 9·5, in the case of female patients 7·3, and for both sexes combined 8·4.

The death-rate in each of the five years 1926-1930 is shown below:—

Year.	Males	Females.	Total.
1926	9·6	12·2	10·9
1927	8·4	6·5	7·4
1928	9·2	8·8	9·0
1929	10·7	9·7	10·2
1930	9·5	7·3	8·4
Average rate for the five years . . .	9·5	8·9	9·2

The following statement shows the principal causes of death:—

General Diseases.

	Males.	Females.	Total.
Tuberculosis of Lungs	5	7	12
„ Intestines and Peritoneum	1	1	2
Epithelioma of Tongue	2	...	2
Diabetes Mellitus . . . . .	...	1	1
Acute Suppurative Mastoiditis	1	...	1

Diseases of the Nervous System.

General Paralysis	3	2	5
Cerebral Hæmorrhage	5	2	7
Cerebral Thrombosis and Embolism	2	3	5
Cerebral Tumour . . . . .	...	1	1
Epilepsy . . . . .	...	1	1

Diseases of the Circulatory System.

Arterio-sclerosis	10	4	14
Myocardial Degeneration	12	14	26
Valvular Disease of the Heart	2	...	2
Hypertrophy and Dilatation of the Heart	1	...	1

Diseases of the Respiratory System.

Acute Broncho-pneumonia	3	1	4
Acute Bronchitis . . . . .	...	1	1
Chronic Bronchitis and Emphysema	1	...	1

Diseases of the Genito-Urinary System.

Chronic Nephritis	1	...	1
Totals	49	38	87

Voluntary Patients.—It should be noted that voluntary patients are included in the foregoing statistical figures.

Of the 367 patients admitted during the year 1930, 88, or 24 per cent., were voluntary patients.

The changes which took place in the case of voluntary patients are shown below :—

	Males.	Females.	Total.
On the Register of voluntary patients at 1st January 1930 .	34	30	64
Cases admitted—	M.	F.	Total.
First admissions	47	17	64
Re-admissions	16	8	24
Total cases admitted during the year	63	25	88
Total voluntary cases under care	97	55	152
Cases discharged and died—	M.	F.	Total.
Discharged recovered	34	18	52
„ relieved	12	7	19
„ not improved	7	2	9
Died	7	2	9
Total voluntary cases discharged and Died during the year	60	29	89
Voluntary cases remaining at 31st December 1930 .	37	26	63

GENERAL HISTORY.

General Health.—Having regard to the fact that of the 367 patients received, 261 or 71 per cent., were in an enfeebled state of bodily health and condition, the general health of the patients and staff was satisfactory during the year. It is thankfully recorded that no fatal accident occurred.

Thirty patients—13 men and 17 women—were suffering when admitted from the effects of serious attempts at suicide. These were as follows :—

Mode of Suicidal Attempts.

	Males.	Females.	Total.
By poisoning by coal gas	4	5	9
„ Other poisons, and swallowing foreign bodies	2	3	5
„ Cut throat	5	3	8
„ Drowning	1	1	2
„ Precipitation	1	3	4
„ Hanging or strangulation . . . . .	...	1	1
„ Burning . . . . .	...	1	1
Totals	13	17	30

In addition a history of suicidal attempts was ascertained in 33 cases—19 men and 14 women. These would-be suicides were cases of melancholia. One hundred and thirty cases of melancholia were received during the year. It is no exaggeration to say that in every case of that disease the idea of suicide is present at some time during the illness. The weight of responsibility and anxiety borne by the nurses who have charge of them will be realised. It says much for their vigilance and unremitting care that suicides do not more often occur in mental hospitals.

Verandah of Villa No. 9.—In this Villa are accommodated male patients of a class requiring continual observation and about one-fourth of their number are confined to bed. It is of advantage to these patients to be treated in the open air, but this it was impossible to carry out on the original small and inconveniently situated verandah of the Villa. This has been replaced by a much extended verandah, with lavatory and bathroom attached, forming an excellent open-air ward containing 12 beds. It has been fully occupied for ten months with notable benefit to a difficult class of patient and to the staff who have charge of them. Incidentally, 12 beds have been added to the accommodation of the Hospital at a cost of about £80 per bed.

Verandahs of the Admission Wards.—Later, in 1911, the verandahs were increased in size, fitted with protective roller shutters and provided with lavatory and bathroom conveniences. These improvements enabled the verandahs to be occupied day and night and in all weathers. Now twenty years later these verandahs have again become overcrowded and certain structural defects are apparent, so there is again an urgent need for reconditioning and bringing up to a modern standard.

Accommodation for Nursing Staff.—At present the Nurses' Home is insufficient for the proper housing of the staff. This is a matter which is, I understand, engaging the attention of the Committee at this moment.

Houses for married male staff.—It is suggested that the desirability of adding to the number of houses provided for the married staff—in particular married attendants, or male nurses—should be considered. There are at the time of writing this report 60 male nurses on the staff of the Hospital and of these, 40 are married. For 28 of these married men houses are provided in the village of Dechmont adjoining the grounds of the institution, leaving 12 who are not so privileged. Of that number there are 8 who have been able to find houses for themselves in Broxburn, Bathgate or elsewhere, and there are four who have not been able to do so and consequently live in the Hospital with the single men.

There is no better way to secure and retain the services of a good class of attendants and other male employees in an institution such as Bangour Village than to allow them to marry and to provide them with houses suitable to their position. The average length of service of the charge male nurses, all of whom are married and occupy good houses, is 23 years.

The Industrial Homes for Male Patients.—The re-conditioning of the wood and iron buildings used as Homes for male patients, referred to in previous reports, has been carried on during the year and completed by an extensive overhaul of Homes 25 and 27. The five buildings of wood and iron were the first to be occupied when Bangour was opened in 1904. They are well planned, convenient, and comfortable houses, each accommodating 50 patients and staff, but owing to their construction they are expensive to maintain.

The re-conditioning of Home No. 21, a substantial stone building for 50 female patients, is now in progress.

Special Treatments Department.—In the separate pavilion provided and equipped for the purpose, patients are attended by the eminent specialists on the Visiting and Consulting Staff of the Hospital. Our thanks are due for the valuable services thus rendered, which involved 120 visits and 614 consultations during the year. In connection with this important department of surgical and medical work the attention of the Committee has been directed to the condition of the X-ray plant. This apparatus was presented by the American Red Cross when several American surgeons were on the resident staff of Bangour War Hospital. It was then an excellent, up-to-date installation. It is now, after so many years' service, out-of-date and, in the opinion of experts, even unsafe. Steps are being taken to have it re-conditioned or replaced.

The Farm.—In the Annual Report of Bangour Village, for the year 1926 it was stated that the milk supplied by the farm was insufficient for the requirements of the institution. In the byre for milking cows there were standings for 64 cows. If each of these was in full milk the quantity would be ample. But in maintaining a tubercle-free herd with cattle of our own breeding there are calves to be fed, and it is inevitable that there are always a number of heifers whose production is low while they are undeveloped, and also a proportion of cows whose production is diminishing with the approaching end of the milking period. It was therefore recommended that, when circumstances were favourable, more accommodation for milking cows should be provided. This has now been carried out by an extension of the byre with standings for 36 additional cows, or 100 in all.

A “Vaccar” milking machine for 100 cows has been installed and, so far, has been found most satisfactory in use.

With a view to facilitating the rapid evacuation of this large byre of valuable cows in the event of an outbreak of fire, an emergency exit has been provided at the western end of the adjoining covered way.

Bangour Farm Road.—In the Annual Report of Bangour Village, for the year 1911, reference was made to this public highway which runs from the main Edinburgh-Bathgate road northwards, passing close to Home No. 21, occupied by female patients, and thence to the farm steading to which it is contiguous on the south, east and north sides. It was stated that this road is but little used except on Sundays in summer, when it is the resort of people who come to satisfy an idle curiosity by watching the patients, and who wander into the houses forming the steading, disturbing the live stock. It was suggested that the road should be closed to the public and another, a little further west, called the Bents Road, substituted for it.

After protracted negotiations with the County Council of West Lothian a successful conclusion was arrived at in 1929. In January 1930, the piece of ground lying to the east of the western boundary of the Bents Road was purchased by the District Board, with the approval of the General Board of Control, from Mr James Cunningham, Drumcrosshall, the adjoining proprietor. With the re-construction of the old Bents Road, to the satisfaction of the Road Surveyor of the Bathgate District of the County Council, that road will be accepted by the County Council as a substitute for Bangour Farm Road, which will then be taken off the List of Highways and closed to the public. In the reconstruction of the Bents Road the labour of patients and staff of the Hospital can be used with advantage, and stones for bottoming, metal, and chippings can be obtained in the immediate vicinity and from Bangour whinstone quarry.

Grounds.—The laying out of the grounds of the Village has been the occupation of a certain number of the patients and staff from the beginning of its history, with the exception of the years of military occupation. Naturally, progress has been slow but it was a notable event when, in the summer of 1930, cricket was played on the Sports Field, the levelling, draining, turfing, and sowing-out of which has been the labour of a party of patients and their attendants for more than 15 years. Much more work on this field has yet to be done, but it is anticipated that when finished it will be at least equal to the best in the County.

The bowling green of the Village not being of full width, play is possible only in the direction of its length. On account of this the turf at the ends soon wears out with over-use. This was brought to the notice of the District Board of Control, and in March 1929, authority was granted by the Board to construct a green of full size, in the vicinity of the industrial homes for male patients, the preliminary work to be executed as far

as possible by patients and staff. With keenly interested anticipation the levelling, draining, and pitching of the site were completed, but for the finishing of the work skilled labour is essential and for this it has waited for many months. It is sincerely hoped that it may be forthcoming without much more delay.

Bangour Memorial Church.—On Friday, 9th May, the beautiful church, built on a commanding site in the grounds as a memorial to the members of the staff who gave their lives for their country, and of the services of the Hospital in the Great War, was opened and dedicated. This was perhaps the most notable and longed-for event in the history of the Village. In the presence of a crowded congregation, which included the Right Honourable the Secretary of State for Scotland and the Chairman of the General Board of Control, the dignified and impressive Service of Dedication was conducted by the Very Reverend J. Montgomery Campbell, D.D., ex-Moderator of the General Assembly, assisted by other members of the clergy. The occasion was one which will never be forgotten by those who were privileged to be present.

Another outstanding event was the dedication of the Organ, which took place on 12th November at an appropriate service, the Very Reverend Dr. Montgomery Campbell again officiating. On this occasion the Organist was Mr W. Irwin-Hunt of St. John's Wood Presbyterian Church, London. Mr Hunt, who was a soldier patient in Bangour War Hospital in 1916, came from London in fulfilment of a long-standing promise to play at this service. And not only that—he drew up the specification of the Organ and watched over the building of the splendid instrument by Messrs Jardine and Company, Manchester. We owe Mr Hunt a debt of gratitude which we can never repay.

Study Tour.—On 10th June we had the honour of a visit by the members of a Study Tour carried out by the Study Tour Sub-Committee of the Clinical and Research Committee of the Royal Medico-Psychological Association. The party consisted of English and Irish members of the Association (including representatives of the English Board of Control and the Inspector of Mental Hospitals of the Irish Free State), who were spending a fortnight in visiting mental hospitals, mental deficiency institutions, and laboratories of psychology and pathology in Scotland. They made a comprehensive inspection of the Hospital, in the special features of which they displayed much interest.

The Laboratory of the Scottish Asylums.—The Annual Report for 1929 of the Laboratory has been placed in the hands of the Public Health Committee. This Laboratory, which is almost entirely maintained by contributions from the governing bodies of the Scottish Mental Hospitals, has now been in existence for a quarter of a century. It is impossible to exaggerate the importance of its work as a centre of research and in stimulating and fostering the spirit of scientific inquiry in the institutions concerned. Such work can only be carried on with the prospect of practical results in a specially equipped laboratory under an enthusiastic research worker such as we are so fortunate to have in the Director—Dr. Reynolds. It is suggested that a representative of the Sub-Committee should be appointed to the General Board of the Laboratory.

Retirement of Matron.—With great regret one has to record the retirement, after 26½ years' service, of Miss Isabel Davidson, from the matronship of the Hospital. Appointed at its very beginning, she identified herself, with characteristic energy, with every stage of its growth and development, so much so that in the course of time even to think of Bangour Village created a mental picture of its Matron.

A woman of outstanding personality, endowed with organising capacity of a high order, Miss Davidson was a tower of strength during the strenuous war years when

Bangour was a first-line Military Hospital of 3,000 beds through whose wards passed over 40,000 sick and wounded men. For her services she was awarded the Royal Red Cross (First-Class), and never was a decoration more worthily bestowed.

Full of warm-hearted sympathy ; beloved, respected and trusted by patients and staff, those who were privileged to know her and to serve with her wish her many happy years.

Acknowledgments.—From the Matron and Assistant Matrons, the heads of departments, and the staff as a whole, I have received loyal and willing assistance in carrying on the work of the Hospital in the harmonious manner to which we have been so long accustomed. The trying and arduous duties of the nurses—male and female—have been faithfully performed. The tactful, kindly and efficient way in which they practise their profession merits the highest commendation and I heartily thank them all.

JOHN KEAY, C.B.E., M.D., F.R.C.P.

Medical Superintendent.

GOGARBURN CERTIFIED INSTITUTION.

(For Mental Defectives.)

The following report refers to the period from 16th May 1930, at which date the Institution was transferred to the Corporation of the City of Edinburgh, to the 31st December, 1930.

In order more clearly to comprehend the development of the Institution, the following facts, although outwith the scope of this report, should be taken into account. The Institution first became available for the reception of patients in January 1924, when a limited number of adult female patients, together with the requisite nursing and domestic staff, were accommodated in Gogarburn House, which had been furnished and refitted for this purpose. By the conversion of the adjoining coach house into a temporary, though serviceable Male Ward, further accommodation for the reception of male patients was made available in June 1926. For several years these two buildings comprised the Institution, which accommodated a total of 59 adult patients of both sexes, and the requisite staff.

In the meantime, however, a scheme had been formulated, and plans had been made for the erection of a much larger Institution, on the " Villa System," destined on its completion to accommodate 1,000 patients, of all ages and all grades of mental defect. Further, it was conceived that the Institution would ultimately serve the South-Eastern Counties of Scotland in addition to the purely local needs of Edinburgh. In spite of the many administrative difficulties which had to be overcome, the scheme gradually crystallised, took definite form, and the actual construction of several buildings was commenced. In the early months of 1930, two low grade blocks were completed. Improvisations were effected in the partially-completed kitchen and laundry buildings, to form a temporary kitchen and laundry. Finally the Institution was formally opened by the Right Hon. W. Adamson, Secretary of State for Scotland, on the 4th April 1930.

The admission of patients to these blocks was proceeding when the Edinburgh District Board of Control, who had conceived, inaugurated, and developed the scheme, demitted office on the Local Government (Scotland) Act becoming operative at the 16th May 1930.

General Statistics.—The following are the general statistics for the period of seven and a half months, from 16th May 1930 to 31st December 1930 :—

	Males.	Females.	Total.
Patients on Register at 16th May 1930	28	45	73
Cases admitted	50	29	79
Total number under treatment	78	74	152
Cases discharged	5	1	6
Cases died	1	...	1
Total cases removed during year	6	1	7
Number remaining on Register at 31st Dec. 1930 .	72	73	145

The figures represent an increase of 44 male patients, an increase of 28 female patients, and a total increase of 72 in the patient population for the term under review.

The average daily number on the register for the period was 145.

Medical Statistics.—It is a source of satisfaction to place on record the first results of a concerted and constructive effort to deal with the problem of mental deficiency in Edinburgh. At the same time it cannot be too strongly emphasised that the institutional accommodation at present available is totally inadequate to cope even with the comparatively limited number of cases who are in urgent need of institutional care.

Admissions.—There were admitted to the Institution 50 male and 29 female patients, a total of 79 admissions, during the period under review.

The place of origin of the patients admitted was as follows :—

	Males.	Females.	Total.
Admitted direct from their homes	33	14	47
„ from Public Assistance Institutions	14	9	23
„ from General Hospitals	1	4	5
„ from Houses of Refuge . . . . .	...	1	1
„ from Prisons	2	...	2
„ from other Certified Institutions . . . . .	...	1	1

The general physical condition of the patients admitted was as follows :—

	Males.	Females.	Total.
In fair or average health and condition	19	6	25
In poor or indifferent health and condition	21	15	36
In weak or very weak health and condition	10	8	18
	<hr/> 50	<hr/> 29	<hr/> 79

Thus in 54 cases, or 68·3 per cent. of the total number of admissions, the standard of health was definitely below par. The following factors were chiefly instrumental in causing this effect :—

(1) Many of the patients admitted were found to be the subjects of faulty personal habits and serious conduct disorder. In many instances the only method of dealing with these cases where special care was not available was to confine them within the limits of their home. Very often these homes were found to consist of a limited number of apartments in tenement buildings situated in crowded districts of the City. This confinement in overcrowded dwellings in densely-populated urban areas was found to be the most frequent and potent cause of ill-health in the patients admitted.

(2) It was found that 21·5 per cent. of the cases admitted had suffered from such organic diseases of the central nervous system as meningitis, infantile paralysis, or

encephalitis lethargica. These diseases, in addition to arresting the normal development of the growing brain, thus giving rise to the resultant condition of mental defectiveness, had usually left in their wake some residual paralysis, giving rise to more or less severe physical deformity and crippling.

Despite an apparently popular belief to the contrary, it is a well established and authenticated fact, that, taken as a whole, mental defectives show markedly diminished powers of resisting the invasion of disease as compared with their normal fellows. This increased liability to contract disease and to disseminate it, often coupled with marked anti-social behaviour, renders the segregation of the lower grades of mental defective a matter of the gravest import from the point of view of the physical well-being of the community, as well as from the point of view of its social welfare.

Classification.—The following Tables show the classification and age-grouping of the patients admitted. With regard to classification, the following definitions have been adopted for grading purposes :—

IDIOTS.—Persons in whose case there exists mental defectiveness of such a degree that they are unable to guard themselves against common physical dangers.

This is the lowest and deepest grade of mental deficiency.

IMBECILES.—Persons in whose case there exists mental defectiveness, which, though not amounting to idiocy, is yet so pronounced that they are incapable of managing themselves or their affairs, or, in the case of children, of being taught to do so.

FEEBLE-MINDED.—Persons in whose case there exists mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision and control for their own protection or the protection of others, or in the case of children, that they by reason of such defectiveness appear to be permanently incapable of receiving proper benefit from instruction in ordinary schools.

It is unfortunate that the Scottish Statutory definition of each of these grades of mental defect requires that the defect shall have been present from birth, or from an early age. It is now generally recognised that disease may cause mental defectiveness by inducing a condition of arrested mental development at any age up to eighteen years.

Age and sex incidence of patients admitted :—

	1-5.		6-10.		11-15.		16-20.		21-25.		26-30.		31-35.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Idiots . . .	...	...	1	2	7	1	1	4	1	...	...	...	...	...	10	7
Imbeciles . . .	1	...	5	5	7	3	7	3	2	3	1	...	1	...	24	14
Feeble-minded . .	...	...	...	1	5	2	6	3	3	2	2	...	...	...	16	8
Total M	1		6		19		14		6		3		1		50	
F.		...		8		6		10		5		...		...		29

Briefly summarised the Table shows that 21·5 per cent. of the cases admitted were idiots, 48·1 per cent. were imbeciles, and 30·4 per cent. were feeble-minded. Further, 81 per cent. of the cases admitted were less than 20 years of age.

Causation.—The causes of the condition of mental defectiveness were, so far as could be ascertained, as follows :—

	Males.	Females.	Total.
Heredity (Primary Amentia)	26	15	41
Cerebral Trauma	2	1	3
Acute Cerebral Inflammatory Disease (Meningitis, Encephalitis)	11	6	17
Congenital Syphilis	4	1	5
Hydrocephalus	2	1	3
Epilepsy	5	4	9
Endocrine and Nutritional Defects . . . . .	...	1	1

Thus in 51·9 per cent. of the total number of admissions, the mental defect was attributable to hereditary taint, in 21·5 per cent. to acute inflammatory diseases arresting the normal development of the growing brain, in 11·4 per cent. to epilepsy, and in 6·3 per cent. to congenital syphilis.

It would be unsafe to draw any general inferences from these figures, as the cases under review have been a selected group who were in urgent need of special care.

Discharges.—Six patients, 5 males and 1 female, were discharged to the care of their relatives, with the consent of the General Board of Control.

Deaths.—One death occurred in the Institution in the period under review. This was in the case of a boy who was admitted from a general hospital in the terminal stages of cardiac disease.

General Health.—The general health of the patients during the period has been most satisfactory. There was no serious illness and a gratifying improvement in the general physical health and well-being of the cases admitted was noted. A striking feature has been the rapid manner in which the younger patients have gained height and weight. There was no sickness amongst the Staff, and it is thankfully recorded that no accident affecting either patients or staff has occurred in the period under review.

Expansion of the Institution.—The erection of the Administrative block, with its annexed admission hospitals, and of two higher grade blocks is proceeding. It is sincerely hoped that some effort will be made during the ensuing year to provide extra laundry and kitchen equipment, which is urgently required. The present improvised services are over-taxed, and it is only with difficulty that they are able to meet the demands made upon them. In any case no expansion of the Institution can occur until these essential services have been materially developed.

Conclusion.—In conclusion, I desire to express my very sincere appreciation of the loyal and devoted service which has been rendered by all members of the staff of the Institution. Their wholehearted co-operation in all matters relating to the welfare of the patients and the Institution, even when such has necessitated heavy incursions into their off-duty time, is deserving of the highest commendation.

REGINALD BAILEY, M.B., Ch.B.,
Medical Superintendent.

SCHOOL MEDICAL SERVICE.

The educational year terminates at the end of the Summer Term ; the following abstracts from the Report to the Edinburgh Corporation Education Committee apply, therefore, to the year ending 31st July 1930.

As this is the first report since the absorption of the School Medical Service into the Public Health Department, the following tabulation is given to indicate the gradual evolution of the scheme.

- 1907 Medical Officer appointed 18th February 1907.
Classes for Mentally Defective Children opened at Albion Road and Milton House Schools.
- 1908 Medical Inspection came into operation (Education (Scotland) Act, 1908).
Willowbrae Special School opened for Mentally and Physically Defective Pupils.
Classes for Mentally Defective Children opened at Gilmore Place School.
- 1909 Two Assistant Medical Officers appointed in December ; three School Nurses also appointed.
Voluntary Schools came under Medical Inspection Scheme.
- 1910 Property at Duncan Street acquired for Mentally and Physically Defectives School.
Property at 41 Lauriston Place acquired for Ringworm School.
- 1911 Merchant Company Schools came under Medical Inspection Scheme.
Another Assistant Medical Officer appointed.
Extra School Nurse appointed.
Class for Mentally Defective Children opened at Towerbank School.
Cooking Centre at Fountainbridge opened.
- 1912 Duncan Street School opened.
Lauriston Special School opened ; School Nurse appointed.
Humbie Special School for Delicate Children opened.
Medical Treatment Scheme : Staff appointed.
- 1913 Treatment Centre opened.
Sanitary Inspector appointed.
Arrangements for provision of spectacles.
- 1914 Classes for Physically Defective Children opened at Gorgie School.
- 1915 Classes for Mentally Defective Children opened at North Merchiston School (transferred to Gilmore Place School).
Extension of Lauriston Special School for Ringworm.
- 1916 Classes for Mentally Defective Children opened at Dean and North Canongate Schools.
- 1917 Itch Cases—Special arrangements for treatment ; School Nurse appointed.
- 1919 Classes for Mentally Defective Children opened at St. Ann's, St. Mary's (York Lane), and St. Patrick's R.C. Schools.
- 1920 Class for Mentally Defective Children opened at Dalry School.
Teacher appointed to Victoria Hospital Class. (Tuberculosis).
- 1921 Amalgamation with Leith.
Two Assistant Medical Officers and two Nurses appointed.
North Junction Street Special Classes transferred to Balfour Place.
- 1922 New premises for Treatment Centre.
Class for High Myopes in Gilmore Place School.
Cobbling Classes in Special Schools.
North Merchiston Special Class transferred to Gilmore Place School.

- 1923 Medical Examination of Children in connection with Employment of Children Act.
Special Class at North Canongate School transferred to Duncan Street and Willowbrae Special Schools.
Teacher appointed to Colinton Mains Hospital Class. (Tuberculosis).
- 1925 Mentally Defective Pupils transferred from Willowbrae to Balfour Place and Duncan Street Special Schools.
- 1926 Balfour Place Special School enlarged.
School for High Myopes at 43 Lauriston Place—pupils transferred from Gilmore Place Class.
Mentally Defective Pupils at Dean and Towerbank Special Classes transferred to Balfour Place Special School.
- 1927 Payment for Medical Treatment instituted.
Dental treatment extended to twelve-year-old pupils; nurse appointed.
Teacher appointed to Douglas Home.
- 1928 Mentally Defective Pupils at Gilmore Place Special Classes transferred to Bruntsfield School (Special Classes).
Mentally Defective Classes in Roman Catholic Schools centralised at St. John's R.C. School, Portobello.
- 1929-1930 Humble School closed; Ceres School enlarged.
Links Place Special School (Children suffering from Ringworm) transferred to Lauriston Special School.
St. Nicholas School opened—classes transferred there from Bruntsfield and Dalry Schools.
Nursery School at Tollcross opened.
- 1930 School Medical Service incorporated with Public Health Department.

Number of Schools.—The number of Schools and Special Classes under the Scheme of Medical Inspection is 120 :—

Elementary Schools	84
Intermediate and Secondary Schools	16
Special Schools and Classes	15
Merchant Company Schools	4
Edinburgh Institution	1
	<hr/>
	120
	<hr/>

The average number of pupils on the roll was 60,784, with an average daily attendance of 54,358 :—

	Average Roll.	Average Attendance.
Elementary Schools	41,186	36,407
Intermediate and Secondary Schools	7,723	7,105
Special Schools	1,069	947
Episcopal Schools	966	867
Roman Catholic Schools	5,739	5,210
Merchant Company Schools	3,828	3,571
Edinburgh Institution	273	251
	<hr/>	<hr/>
	60,784	54,358
	<hr/>	<hr/>

Medical Inspection.—This may be summarised briefly as follows: Four groups of pupils are examined: newly enrolled infants, nine-year-old pupils, twelve-year-old pupils in the Intermediate and Secondary Schools, and leavers. Schools are visited at regular intervals during the session by doctor and nurse. The larger schools are visited once a fortnight, smaller schools every three or four weeks.

At each visit to schools for routine inspection, a certain time is devoted to the examination of any pupils presented by the Head Master or sent by the Attendance Officers; these constitute the "special cases" mentioned in the Report. In addition, Monday forenoons and Wednesday afternoons are devoted to the examination at Lauriston Place Treatment Centre of cases sent up by the Chief Attendance Officer, and to cases requiring more detailed examination. Similar cases are examined at Links Place Treatment Centre on Wednesday afternoons.

All the Special Schools are visited at regular intervals.

School Nurses.—The total number of nurses on the staff is sixteen. Six assist at school inspection, four are attached to the Special Schools, and six to the Treatment Centres.

In addition to assisting at routine inspections, where 1,400 visits were paid to schools, 11,831 special examinations were made by the nurses in schools, and 1,411 visits to homes.

Arrangements for "Following Up."—Notices to the number of 394 were issued from schools in connection with dirty and verminous conditions. These cases are visited at home by the school nurses, but it was found necessary to serve statutory Warning Notices upon 31 parents for non-compliance with instructions.

Insufficient Food, Boots, or Clothing.—Warning Notices are sent from schools regarding these conditions, and when application is made by parents for assistance, either for food or clothing, a full inquiry is made into the case by a committee, which decides whether the case is one of poverty and deserving relief, or one of neglect to be dealt with by Statutory Notice, etc. The requirement as regards clothing and boots for necessitous children continues to be met by the operations of the Police-Aided Clothing Scheme and other charitable agencies.

The following Table shows the number of Warning Notices under Section 6 of the Act served upon parents for the various forms of neglect:—

Forms of Neglect.	Number of Notices served.
Insufficient Boots or Clothing	5
Dirt and Vermin	31
Neglect of Medical Treatment	4
Lack of Food . . . . .	...
	—
	40
	—

Number of Children Examined.

	Total No. of Examinations.		Total No. of Examinations.
Infants—Boys, 3,223 ; Girls, 3,105	6,328	Special Cases at Schools	9,684
9-year-olds—Boys, 2,877 ; Girls, 2,924	5,801	Special Cases at Clinics	5,620
12-year-olds—Boys, 284; Girls, 302	586	Neglect Cases	11,831
Leavers—Boys, 1,637 ; Girls, 1,638	3,275	Re-examinations	2,160
Merchant Company Schools—		Examinations in connection with Employment of	
Boys, 734 ; Girls, 682	1,416	Children Act	1,918
Royal High School	291		—
Edinburgh Institution	100		31,213
Special Schools : Examinations and re-examinations	1,500		
Students in Preliminary Training	57		
	—		
	19,354	Total number of examinations made in year	50,567
	—		—

Special Cases seen at Schools.—9,684 cases were presented at schools for medical examination. The following figures show the nature and number of cases examined :—neglect cases, 400 ; broken-out head, 238 ; skin diseases, 928 ; teeth, 989 ; tonsils and adenoids, 591 ; glands, 131 ; eyes, 2,904 ; ears, 328 ; speech, 39 ; dull or defective, 85 ; heart, 64 ; lungs, 329 ; anæmia, 66 ; non-pulmonary tuberculosis, 19 ; deformities, 16 ; rickets, 11 ; nervous system, 92 ; injuries, sores, etc., 1,175 ; in connection with infectious diseases, 431 ; general debility, 331 ; other causes, 517.

Special Cases seen at Clinics.—Number of cases, 3,423 ; number of examinations, 5,620.

The figures in the following Tables show the physical condition of the children examined.

Nutrition.

	Number examined.	Above Average.		Average.		Below Average.		Bad nutrition.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
<i>Infants—</i>									
Boys . .	3,223	528	16·3	2,269	70·4	419	13·0	7	0·2
Girls . .	3,105	527	17·0	2,185	70·4	385	12·4	8	0·2
<i>9-year-olds—</i>									
Boys . .	2,877	586	20·4	1,968	68·4	315	10·9	8	0·3
Girls . .	2,924	610	20·8	2,029	69·4	282	9·7	3	0·1
<i>12-year-olds—</i>									
Boys . .	284	57	20·1	207	72·8	20	7·0	...	...
Girls . .	302	73	24·0	210	70·0	19	6·0	...	...
<i>Leavers—</i>									
Boys . .	1,637	336	20·5	1,218	74·4	81	4·9	2	0·1
Girls . .	1,638	498	30·4	1,076	65·7	64	3·9	...	...
Total . .	15,990	3,215	20·1	11,162	69·8	1,585	9·9	28	0·1

Throat.

	Number examined.	Tonsils.				Adenoids.				Other diseases.	
		Slightly enlarged.		Markedly enlarged.		Probably present.		Present.			
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
<i>Infants—</i>											
Boys .	3,223	889	27·5	190	5·9	139	4·3	12	0·3	12	0·3
Girls .	3,105	859	27·7	185	5·9	115	3·7	27	0·8	5	0·1
<i>9-year-olds—</i>											
Boys .	2,877	642	22·3	119	4·1	104	3·6	13	0·5	10	0·3
Girls .	2,924	705	24·1	120	4·1	94	3·2	8	0·3	6	0·2
<i>12-year-olds—</i>											
Boys .	284	64	22·5	8	2·8	5	1·7	1	0·3	...	...
Girls .	302	65	21·0	7	2·5	2	0·6	...	...	2	0·6
<i>Leavers—</i>											
Boys .	1,637	242	14·7	23	1·4	5	0·3	2	0·1	7	0·4
Girls .	1,638	272	16·6	39	2·3	18	1·1	1	0·06	6	0·3
Total .	15,990	3,738	23·3	691	4·3	482	3·0	64	0·4	48	0·3

Special Schools.—The following is a list of the Special Schools and Classes which were open during the session, and the number of pupils on the roll as at the close of the session :—

For Mentally Defective Children—

Balfour Place School . . .	166
Duncan Street School . . .	87
St. John's R.C. Classes (3) . .	55
St. Nicholas School . . .	56
	<hr/>
	364
	<hr/>

For Physically Defective Children—

Clarebank School	138
Duncan Street School	63
Gorgie School	150
Willowbrae School	95
	<hr/>
	446
	<hr/>

For Children suffering from Ringworm—

Lauriston Place School. . . .	20
	<hr/>

For Delicate Children—

Ceres School	65
	<hr/>

For Children suffering from High Myopia

Myopia School	79
	<hr/>

For Children suffering from Tuberculosis—

Colinton Mains Hospital Class .	18
Victoria Hospital Class . . .	11
	<hr/>
	29
	<hr/>

For Cripple Children—

Douglas Home	20
	<hr/>

Physically Defective Children.—There were 446 pupils on the roll at the end of the session classed as physically defective. The following is a rough classification of the defects formed :—

Paralysis of various types . . .	44	Heart Affections	46
Tubercular disease of—		Speech defects	5
Bones	14	Otorrhœa and Deafness . . .	10
Hip Joint	3	Lung disease (bronchitis and pre-	
Abdomen	13	tubercular cases)	110
Glands	9	Defective vision	4
Spinal Cases	8	Malnutrition.	21
Rickets	36	Other conditions	120
Accidents	3		<hr/>
			446
			<hr/>

A marked improvement in general health usually follows admission to the Special Schools, due partly to the regular feeding and the cod-liver oil emulsion, etc., supplied, and also to good hygienic conditions, each school having its garden, and being conducted to a large extent on the lines of an "open air" school. The constant supervision of the school nurses also contributes largely to the improvement in the pupils' health.

Mentally Defective Children.—Head Masters of all schools submit to the Education Committee a report on any pupils whom they consider to be mentally defective. These cases are then examined and tested by the medical staff, and the reports by them and the class teachers are submitted to the Education Committee, who decide whether the child should be sent to a Special School or Class, or dealt with as a backward pupil, or otherwise.

188 such cases were reported during the session from 50 schools :—

- 94 were passed for Special Schools or Classes :
- 7 were passed for Special Schools or Classes, on probation ;
- 46 were considered dull or backward ;
- 23 were delayed ;
- 1 was considered more P.D. than M.D. ;
- 6 were to remain at their ordinary schools ;
- 10 were considered ineducable ;
- 1 was admitted to Larbert Institution.

Of the 23 delayed cases, 3 were passed for Special Schools ; 2 were considered dull or backward ; 1 was to remain at ordinary school ; 1 was considered ineducable. The other 16 are still to be re-examined.

There were 364 mentally defective pupils on the roll at the end of the session. These have been classed according to the progress made during the session :—

Good	169 or 46·2 per cent.
Fair	149 or 41·0 „
Little progress	46 or 12·8 „

83 pupils left during the session. The reasons for leaving were as follows :—transferred to other Special Schools, 7 ; sent to Institution, 7 ; over age, 28 ; medically exempted, 9 ; left district, 4 ; granted exemption before attaining 16 years, 8 ; ineducable, 20.

In the case of pupils leaving to go to work inquiry is made by the teacher as to the nature of the work and advice given as to the work for which the pupil is best suited.

The number of educable defective children maintained by the Education Committee in certified Institutions is as under :—

	Boys.	Girls
Baldovan	2	4
Larbert	4	2
Waverley Park . . . . .	....	1
St. Joseph's R.C.	3	4
	<hr/> 9	<hr/> 11
	<hr/> <u>20</u>	

The number of ineducable mentally defective children reported to the General and District Boards of Control was 75.

Blind, Deaf-Mute, and Epileptic Children.—Blind and deaf-mute children are dealt with under the powers of the Education of Blind and Deaf-Mute Children (Scotland) Act, 1890, and epileptic children under the Education of Defective Children (Scotland) Act, 1906, as read with the Education Acts of 1908 and 1918. As the Education Committee have no schools under their management for the education of such children, they are sent to special institutions. The following shows the institutions to which children have been sent, and the number of children maintained there by the Education Committee as at the end of the session :—

	Boys.	Girls.
Royal Blind Asylum, Edinburgh	7	4
Deaf and Dumb Institution, Edinburgh	18	14
Donaldson's Hospital, Edinburgh	5	4
St. Vincent R.C. School, Glasgow	1	1
	<hr/> 31	<hr/> 23
	<hr/> <u>54</u>	

Blind Persons Act, 1920.—The Education Committee are responsible for the technical training at the Royal Blind Asylum workshops of 55 Adult blind persons (37 men and 18 women). The training consists of basket-making, brush-making, and mat-making for men, and machine-knitting for women ; in the case of special men trainees instruction in piano-tuning is given, and in the case of special women trainees instruction in massage.

Lauriston Place Special School for Skin Diseases.—This school has accommodation for 60 pupils, and during the session 65 pupils attended, 45 being sent out cured. Of the 45 cases cured, 9 had X-ray treatment, 3 drug treatment, and 33 thallium acetate treatment.

Ceres Special School.—This school is carried on by the Education Committee under an arrangement with the Leith Holiday Home Committee, and has accommodation for 60 pupils.

251 pupils attended during the session.

The Education Committee pay a sum to meet the cost of food and lodging for the children, a charge being made to parents appropriate to the circumstances of each case.

The Education Committee are managers of the school, and have, through their teachers, complete control of the education of the children in residence.

The majority of the children sent to this school suffer from debility and anæmia, though a fair number are cases recovering from illnesses or operations.

There are three teachers.

Feeding of Children.—Under the Education Committee's present arrangement, dinners are supplied to three groups of children: (1) necessitous, supplied free; (2) pupils whose parents pay at the rate of 1½d. per dinner; (3) a special two-course dinner at a higher rate for Special Schools and some of the Secondary Schools.

The following information has been supplied by the Chief Attendance Officer:—

Under the Education Committee's Feeding Scheme, dinners were supplied throughout the session to necessitous pupils and to paying pupils.

The sum received from paying pupils was £1,627, 11s. 6d.

The number of dinners sent out from the Cooking Centre was 899,183, and the average cost per meal was 1·01d. for food and 1·12d. for administration—Total, 2·13d. The total expenditure for the year to 15th May in connection with the Feeding Scheme was £7,977, 2s. 9d. The receipts amounted to £2,940, 11s. 4d. The net cost was £5,036, 11s. 5d.

Medical Treatment.—The medical treatment provided by the Education Committee is best described under two heads: (1) Work done at the Treatment Centres; (2) Arrangements made for the treatment of ringworm.

Treatment Centres.—There are two fully equipped Treatment Centres—one at 45 Lauriston Place, Edinburgh, and one at 5 Links Place, Leith, and two Sub-Centres for minor ailments, one at Dalry School and one at Regent Road School, both of which are open on two afternoons per week. The Staff at the Lauriston Place Centre consists of (1) one part-time oculist for the treatment of defective vision; (2) one part-time aurist for examination and treatment of ear, nose, and throat; (3) four part-time dentists for the treatment of defective teeth; (4) three whole-time nurses who assist the oculist, aurist, and dentists, and, in addition, carry out treatment for minor ailments; (5) one nurse for treatment of itch cases.

The Staff at Links Place Centre consists of (1) one part-time oculist for the treatment of defective vision; (2) one part-time aurist for examination and treatment of ear, nose, and throat; (3) two part-time dentists for the treatment of defective teeth; (4) two whole-time nurses who assist oculist, aurist, and dentists, and, in addition, carry out treatment for minor ailments; (5) an attendant for treatment of itch cases.

The work at Dalry and Regent Road Sub-Centres is carried on by the existing nursing staff.

There is a Special School for pupils suffering from Ringworm at 41 Lauriston Place, where treatment is carried out by the nurse.

The number of pupils who attended the Treatment Centres during the session is as follows :—

	Lauriston Place Centre.		Links Place Centre.		Dalry Sub-Centre.		Regent Road Sub-Centre.	
	No. of Pupils.	No. of Attend-ances.	No. of Pupils.	No. of Attend-ances.	No. of Pupils.	No. of Attend-ances.	No. of Pupils.	No. of Attend-ances.
Examined by Oculist .	1,794	2,726	658	740	...	...	...	...
" " Aurist .	441	475	229	372	...	...	...	...
<i>Treatment—</i>								
External Eye Diseases .	398	3,265	237	1,422	41	116	40	129
Diseases of Ear .	233	1,149	41	530	11	53	28	163
Diseases of Skin and								
Minor Ailments .	690	4,443	555	926	497	1,699	314	876
Itch .	262	2,078	83	1,677	...	...	...	...
Fitting and Repair of								
Spectacles .	1,581	1,581	668	668	...	...	...	...
Defective Teeth .	3,639	3,708	1,505	1,701	...	...	...	...
Total .	9,038	19,425	3,976	8,036	549	1,868	382	1,168

Minor Ailments.—The treatment of minor ailments is carried out by the six nurses at the Treatment Centres under the supervision of the oculist and medical staff.

Diseases of the Skin, Septic Sores, Injuries, etc.—At Lauriston Place Clinic 690 cases were treated, making 4,443 attendance.

At Links Place Clinic 555 cases were treated, making 926 attendances.

The majority of the cases treated were cases of impetigo of head or face, eczema, sores, and injuries.

At Dalry Sub-Centre 497 cases were treated, making 1,699 attendances.

At Regent Road Sub-Centre 314 cases were treated, making 876 attendances.

Ringworm.—X-ray treatment of children suffering from ringworm is carried out at the Royal Infirmary. The nurse attached to the Special Skin School carries out the after-treatment of these cases, and also cases treated at the Royal Infirmary by thallium acetate.

All pupils who are X-rayed get drug treatment for a certain time afterwards. Some pupils receive drug treatment only.

Treatment of Itch Cases.—Provision is made at Lauriston Place and Links Place Treatment Centres for the treatment of itch cases. Baths are provided, and a special nurse and attendant supervise the bathing and ointment treatment of the pupils. The following are the results for the session, viz. :—**Lauriston Place Centre**—Number cured : boys, 144 ; girls, 118—Total, 262. The number of attendances made was : boys, 1,153 ; girls, 925—Total, 2,078. **Links Place Centre**—Number cured : boys, 36 ; girls, 47—Total, 83. The number of attendances made was 1,677. The number of children bathed and disinfected at the Public Disinfecting Station was : boys, 106 ; girls, 100—Total, 206.

PORT SANITARY ADMINISTRATION.

The following is a report of the Port Sanitary Administration which has been prepared by Dr. Grierson, Assistant Medical Officer of Health, and Mr Ritchie, Chief Sanitary Inspector.

As the duties in connection with the Sanitary Administration of the Port of Leith have increased greatly in the last few years it is felt that the increased activities necessitate a combined report of the work involved.

The trade of the Port of Leith is world-wide, as indicated by the following list of foreign ports from which vessels arrive in the Port Sanitary District :—

Principal Trading Ports.

North American—New York, Philadelphia, Portland, Baltimore, Montreal, San Francisco.

South American—Buenos Aires, Bahia Blanca, Rosario.

Continental—Stockholm, Helsingfors, Leningrad, Libau, Königsberg, Danzig, Stettin, Hamburg, Bremen, Copenhagen, Amsterdam, Rotterdam, Antwerp, Havre, Bordeaux, Oporto, Lisbon.

Mediterranean—Marseilles, Oran, Bona, Tunis, Alexandria, Port Said.

Indian—Karachi, Bombay, Calcutta, Rangoon.

Eastern—Shanghai, etc.

The bulk of the foreign shipping comes from Continental Ports. In addition there is a large amount of coastwise shipping from Home Ports, besides the constant arrival of vessels in the fishing industry.

Although trade itself has not materially improved, the amount of shipping entering the Port Sanitary District has increased to 10,382 representing a tonnage of 2,917,554, an increase of 558 vessels and 11,732 tons over last year. A Table showing the number of vessels inspected is included at the end of the report.

IMPORTS AND EXPORTS.

The principal items of cargo imported at Leith consist of wheat, barley, oats, maize, rye, flour, meal, sugar, fruit, cement, timber, guano, manure, flax, hemp, fish (fresh and cured), butter, eggs, and esparto grass. Of these the chief import is grain. The exports are chiefly coal, iron, oil, liquor, and ammonia. Coal is the heaviest export.

CASES OF ILLNESS ON VESSELS ARRIVING AT THE PORT.

Date.	Nature of Illness.	Name of Vessel.	From
1930			
Jan. 13	Chickenpox	s.s. "Martaban"	Rangoon.
" 18	Scarlet Fever	s.s. "Pharos"	Coastwise.
" 31	Diphtheria	s.s. "Ellen"	Fishing Vessel.
Mar. 17	Venereal Disease	s.s. "Kurbads"	Black Sea Ports.
" 18	Do.	s.s. "Estoril"	Baltic Ports.
" 21	Accident	s.s. "Oskar"	Trouville
April 22	Venereal Disease	s.s. "Oaro"	Aguilas
May 3	Measles	s.s. "Borthwick"	Rotterdam.
" 5	Venereal Disease	s.s. "Crandon"	Braila.
" 22	Measles	s.s. "Norna"	Coastwise.
June 6	Swollen Leg	s.s. "Clermiston"	Rafso.
" 7	Tonsillitis	s.s. "Francromani"	Redi.
" 30	Dysentery	s.s. "Siren"	Oran.
" 30	Venereal Disease (3 cases)	s.s. "Estoril"	Baltic Ports.
July 9	Appendicitis	s.s. "Gottfrid"	Arzew.
" 9	Abscess of leg	s.s. "Esther Marie"	Oran.
" 11	Sprained Leg	s.s. "Bengloe"	China Ports.
" 31	Venereal Disease	s.s. "Ysseldyk"	Braila.
Aug. 4	Septic Tonsillitis	s.s. "Cara"	Arzew.
" 8	Venereal Disease	s.s. "Wilhelm"	Leningrad.
" 14	Gastric Disorder (2 cases)	s.s. "Jupiter"	Bilbao.
" 19	Typhoid Fever	s.s. "Jupiter"	Bilbao.
Sept. 9	Nervous Disease	s.s. "Soutra"	Pernau.
Oct. 10	Accident	s.s. "Cairnvalona"	Montreal.
Nov. 17	Diphtheria	s.s. "Kolsdal"	Granville.
" 28	Venereal Disease	s.s. "Osman"	Oran.
Dec. 9	Erysipelas	s.s. "City of Batavia"	Dunkirk.
" 22	Tonsillitis	s.s. "Gunhild"	Baltic Ports.

MEDICAL INSPECTION.

The Public Health Administration of the Port of Leith falls under two headings, (1) the medical inspection of aliens and (2) the inspection of ships. The former is not an arduous duty as the number of aliens arriving at the Port is not great. It can also be said that the majority arrive from adjacent European countries, such as Iceland, Denmark, Sweden, Holland, Germany, etc., where dangerous infectious disease is not, as a rule, prevalent to any extent. Particularly is this so as regards Cholera, Plague and Yellow Fever, and inspection under the Aliens Order 1920 consists of the detection of the more common acute infectious diseases, physical disabilities, skin disease, lousiness, etc.

During the year 1930, 1,260 alien passengers arrived at the Port and of these 339 were examined at the request of H.M. Alien Immigration Officer.

SHIP INSPECTION.

The inspection of ships arriving from foreign ports is a more responsible task as vessels are always arriving from all parts of the world. This necessitates the constant attendance at the docks of two sanitary inspectors who have special experience of the work.

The routine carried out at Leith is as follows :—

Customs officers ascertain the names and ports of departure of all ships on arrival at the hailing station at the pier-head. The information is transmitted to the water-guard office where lists of arrivals are obtained by the port sanitary officers. In this way the inspectors are made aware of all ships coming from plague-infected ports or from other ports which may be under suspicion. Such vessels are boarded immediately they enter the docks and an accurate account of the loading ports, ports of call, of the health of passengers and crew, and any other relevant information, is obtained from the master or chief officer.

In ordinary circumstances when there is no illness on board and where a valid deratisation certificate is produced, the detailed inspection is delayed until all arrivals have been boarded and questioned. This gives the sanitary officer an opportunity to report to headquarters any matter of urgency which may require immediate attention.

A routine inspection is made in all ships of cabins, quarters, stores, holds, etc., and any sanitary defects are noted and reported. The owners are instructed to attend to any nuisance that is detected, and they frequently carry out improvements involving slight structural alterations, which are suggested from time to time by the sanitary officers, to improve the hygienic condition of their ships.

Particular attention is paid to the general cleanliness of the ship and to the inspection of the living quarters for infestation with bed bugs or other vermin. Where so infested, the master is required to get rid of the vermin. The method to be used is not, as a rule, stipulated, but must be such as will effectively deal with this nuisance. This may necessitate the fumigation of the quarters if the infestation is at all marked.

SHIP FUMIGATION.

Under the agreement arrived at through the International Sanitary Convention of 1926, all ships trading with foreign countries are required to possess a Deratisation or Deratisation Exemption Certificate. Regulations making this compulsory were issued by the Department of Health and took effect on the first of January 1930. This work has been carried out in Leith since 1923, for the benefit of ships trading with America, and the regulations, therefore, did not involve much additional work for the Port Sanitary Staff. The certificates are issued by countries which have ratified the

convention at ports approved for this purpose. They are valid for 6 months and must be renewed after this period has elapsed. Where a ship is homeward bound and the certificate has just expired, port authorities may grant one month's extension in order that the vessel may proceed to its home port for fumigation. It is recommended that fumigation should not be insisted on, in the absence of plague, in ships holding valid certificates except under exceptional circumstances, *e.g.*, where the rat population is so great that deratisation is necessary to prevent nuisance. When carried out for this reason a short report on the matter will be forwarded to the Department of Health and a copy given to the master.

Where deratisation exemption certificates are desired the master must take steps to render the ship as rat-proof as possible by reducing to a minimum any rat harbourage and by making access to food supplies as difficult as possible. In addition when cargo liable to contain rats is loaded, trapping should be resorted to.

The examination of ships under the above regulations is thus an important part of the duties of the Port Sanitary Inspectors. The presence of runs, droppings, etc., are noted, and a rough estimation is made of the rat population of the ship. When no rats are present an exemption certificate is issued, but where the infestation is marked, the master is instructed to arrange for fumigation of his ship. When this is satisfactorily carried out a deratisation certificate is granted.

The types of fumigant which may be employed are varied and depend to a certain extent on the method used. Four different procedures can be adopted (1) the "pot method" in which the chemicals are "dumped" or burned in pots or tubs; (2) the generation outside the ship of gas in a mechanical device such as the Clayton apparatus or Liston's fumigator; (3) the use of liquid gas (*e.g.*), liquid cyanide or "Sulphume"; (4) the use of a preparation in which chemicals are incorporated in an infusorial earth (*e.g.*), "Cyclon B."

Whatever method is used, there are certain requirements that a good fumigant should meet. It should be highly toxic and should have efficient penetrative qualities; it should be easily detected in sub-lethal concentrations and must be harmless to foods; it should be non-explosive and non-persistent, and should not corrode metals or harm fabrics. Finally, it should be easily manipulated and not too expensive.

In selecting a fumigant the following points have to be considered:—

With the pot method Sulphur or Cyanide may be used. Sulphur is generated by burning this chemical in pots, three pounds being required for every 1,000 cubic feet of space. Only good sulphur must be employed and each pot should contain only as much as will be completely burned out in 6 hours, which is the minimum time of exposure. Where Cyanide is used it is customary to use chemicals which will produce a mixture in the proportion of 70 per cent. Cyanogen Chloride to 30 per cent. hydrocyanic gas. The standard required is 4 ounce Sodium Cyanide for each 1,000 cubic feet of space and the minimum length of exposure is 2 hours.

The pot method necessitates the operator placing the receptacles in position, and, after lighting the sulphur or mixing the cyanide compounds, escaping from the ship fairly quickly to avoid being overcome by the gas. This constitutes a considerable element of risk that is always associated with this method. It can to a certain extent be obviated and will be referred to later.

The generation of gas outside the ship—either sulphur dioxide in a Clayton apparatus or hydrocyanic acid gas in Liston's fumigator—and its introduction into a ship, requires cumbersome and expensive apparatus and the use of numerous pipes through which gas is led.

Liquid gas may be employed in a number of different ways. It has been poured into holds through a space made by lifting part of a tarpaulin covering the hatches. This involves the use of gas masks by the operators and the disadvantage of the method lies in the fact that an uneven distribution of the gas in the holds may result in failure to destroy all the rats present in the ship. This happened in Leith when a ship was fumigated in this way.

Liquid gas is more evenly distributed and more effective when H.C.N. or Sulphure is sprayed into compartments from cylinders, or when H.C.N. is allowed to drop by a special apparatus from an inverted bottle into a tray where it evaporates, as in the Galardi method.

The use of "Cyclon B." in which the cyanide is incorporated in a solid infusorial earth is also very effective. The chemical is scattered on the floor of holds, etc., and gives off its gas slowly.

As the Master of a ship is responsible for arranging to have fumigation carried out the method to be used will depend on the fumigating company which he chooses, and this in turn depends on the cost of the various methods and their effectiveness. All that the local authority is concerned with is to see that the fumigant has effectively destroyed the rats. In Leith most shipping firms employ a local firm to deratise their ships, as they have found that the firm carried out the work to the satisfaction of the local authority.

This company uses Cyanogen Chloride by the pot method.

While we are aware that the pot method is regarded as being old-fashioned, we are bound to record the fact that the results obtained by this procedure in Leith have always been extremely satisfactory.

For deratisation 5 oz. of Sodium Cyanide are used for each 1,000 cubic feet of space rather than the 4 oz. originally recommended, and when the strength is increased three times (15 oz.) it is our experience that the gas effectively destroys not only rats but also bed bugs and their eggs. The power of cyanide in dealing with this latter nuisance was reported by the Port Authorities at Liverpool in 1924. The extensive series of experiments carried out at that Port demonstrated conclusively the above fact.

It can be stated that the Cyanogen Chloride mixture evolved by the pot method conforms with the requirements already mentioned. It is highly toxic and has efficient penetrating properties. It is easily detected in sub-lethal quantities, is non-explosive, and is non-persistent if the precautions detailed below are carried out. It does not corrode metals or harm fabrics and is easily manipulated. Finally it has the additional advantage of being less costly than most methods of fumigation with cyanide.

Originally H.C.N. alone was used but it was found that the gas was generated so quickly that the risk of the operators being overcome before they could escape from the ship was too great. This was obviated by the use of Cyanogen Chloride mixture which has a lachrymal effect and the generation is delayed by the addition of talc to the mixture. This retards the liberation of the gas for fully twenty minutes and the workmen have thus plenty of time to carry out their operations in all parts of the ship. Any danger that may arise is confined to the procedure of opening up the ship and clearing it of gas.

Before fumigation is started a thorough inspection of the ship is made by the Port Sanitary Officers, who supervise the sealing up of the various compartments to be fumigated. They are also responsible for seeing that bilge boards, pipe casings, etc., are opened up to allow free access to the gas; that dunnage in the holds is properly stacked; and any rat harbourage which might protect the rats from the gas is removed.

During fumigation only inspectors and fumigators are allowed on board, and notices giving warning that fumigation is in process are placed on all gangways.

We require the fumigating company to obtain, immediately before fumigation, a signed statement from the master or officer in charge that no person remains on board the ship, and we have insisted recently that the company deliver a certificate, after fumigation is over, to the officer in charge stating that the ship is free from gas and may be entered. A duplicate of this certificate is delivered to the Port Sanitary Office.

We have thus laid the responsibility of clearing the ship of gas entirely on the fumigating agents and they are also responsible, along with the ship's officers, for seeing that the crew are removed from the ship before fumigation commences and that no unauthorised persons are on board. It is of interest to note that the company close many of the port-holes with special cardboard discs attached by a steel spring. These are gas-tight and can be readily knocked in from outside the ship and thus facilitate clearing the vessel of gas. Tests for the presence of H.C.N. are made by the fumigators who use Benzidine Copper acetate papers and cages of live rats. Slips printed in the language of the nationality of the ship's crew are pinned to the bedding in each bunk, giving instructions to shake the bedding in the open air for at least 15 minutes.

It has been our experience at Leith that the fumigation of ships with cyanide has proved much more satisfactory than with sulphur. With regard to the different methods by which cyanide may be used, we are perfectly satisfied that the cyanogen chloride mixture generated by the pot method is quite as efficient as any other procedure, and that it is perfectly safe to manipulate provided adequate care is taken before fumigation to see that no unauthorised person is on board ship, and that the vessel is made properly free from gas after fumigation is over. Moreover, we are convinced that cyanide is the only agent which will destroy bed bugs and their eggs in ships infested with this nuisance.

RAT REPRESSION.

In addition to the deratisation of ships, it is necessary that precautions should be taken to reduce the rat population in the docks. The rat guarding of ropes and hawsers to prevent the escape of rats ashore was carried out on all vessels when required, and periodical and systematic measures were taken by the Dock Commissioners for the destruction of rats ashore. Over 15,000 poisoned baits were laid within the dock estate which extends to 350 acres. Traps were regularly set throughout the sheds and wharves and 155 rats were caught.

SANITARY IMPROVEMENTS.

Over 6000 nuisances were dealt with during the course of the year, comprising the destruction or cleansing of dirty beds and bedding, the cleansing of dirty bunks, floors, tables, lockers, the improvement of light and ventilation, the extermination of vermin, and the painting and cleansing of the interior surfaces of crews' quarters, living-rooms, and food-stores. Other matters which called for attention were the cleansing and repair of sanitary conveniences, the removal of garbage, the cleansing of drinking-water tanks, the cleansing of store-rooms and bilge spaces, and the painting of galleys and pantries.

CREWS' QUARTERS.

During inspection of vessels particular attention is paid to the condition of the crews' living accommodation, and although there is still much room for improvement it is found that more attention is being paid to the general sanitary condition of cabins and forecastles.

This improvement is more apparent in the latest type of vessels in which increased cubic capacity, clothes' lockers, and washing accommodation are provided. It is where lighting is deficient, and especially in those forecastles where artificial lighting by oil

lamps has to be resorted to, that dirty conditions are most frequently found. It is satisfactory to note, however, that during the year, there has been a marked decrease in the number of nuisances due to lack of cleanliness, although there has been an increased number of vessels entering the port.

DOCK MEASURES.

The Leith Dock Commissioners maintain a high standard of cleanliness within the dock area, the roads, sheds, wharves, conveniences, etc., being systematically kept clean.

A leaflet in connection with venereal disease, printed in four languages, drawing the attention of sailors to the existence and location of the Seamen's Dispensary at the Shore where skilled treatment is available, is left on board all vessels visited. In addition placards to the same effect are maintained in selected places throughout the docks.

CLASSIFICATION OF ALIEN PASSENGERS.

Resident returning.	In transit.	Visitors of Six Months or less.		Diplomats and persons on Foreign Government Missions.	Seamen.	Seamen under contract to join ship in British waters.	Ministry of Labour Permit.	Aliens coming to settle not holding M.L. Permit.
		On holiday, tourists, etc.	On Business.					
67	283	675	136	3	0	44	24	23

Form A.

AMOUNT OF SHIPPING ENTERING THE PORT SANITARY DISTRICT
DURING THE YEAR 1930.

		Number.	Tonnage.	Numbers Inspected		Number reported to be defective.	Number of Notices issued.
				by the Assistant M.O.H.	by the Sanitary Inspector.		
Foreign	Steamers . .	1,387	1,322,847	112	711	23	14
	Motor . .	17	12,508	4	12	1	...
	Sailing . .	6	742	4	...	...	...
	Fishing . .	1	80	...	...	...	...
Total Foreign . . .		1,411	1,336,177	120	723	24	14
Coastwise	Steamers . .	5,109	1,265,417	22	152	25	6
	Motor . .	13	5,959	2	8	...	...
	Sailing . .	41	4,567	...	...	...	...
	Fishing . .	3,808	305,434	...	318	...	...
Total Coastwise . . .		8,971	1,581,377	24	478	25	6
Total Foreign and Coastwise		10,382	2,917,554	144	1,201	49	20

Form B.

RATS DESTROYED IN 1930.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year.
Black rats }	176	201	26	103	104	27	98	127	132	103	113	57	1,267
Brown rats }													
Rats examined	5	3	...	7	8	...	2	8	4	14	4	2	57
Rats infected with plague . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Rats not infected with plague	5	3	...	7	8	...	2	8	4	14	4	2	57

Form C.

PRECAUTIONS AGAINST PLAGUE.

Particulars relating to vessels Infected or Suspected or from infected Ports.

	Date of Arrival.	Whether Infected, Suspected, or from an Infected Port.	Method of Rat Destruction Employed.			No. of Rats killed.	Whether a Certificate of Deratisation Issued.	Remarks.
			SO ₂	H.C.N.	Poison Traps.			
1	Jan. 6	Singapore . . . . .	...	1	...	98	1	...
2	" 7	Bombay . . . . .	...	...	1	2	...	...
3	" 14	Arzew . . . . .	...	...	1	nil	...	...
4	" 16	Shanghai . . . . .	...	...	1	nil	...	...
5	" 27	Rosario . . . . .	...	1	...	100	1	...
6	" 27	Rosario . . . . .	...	...	1	7	...	...
7	" 28	Rangoon . . . . .	...	...	1	nil	...	...
8	" 30	Calcutta . . . . .	...	...	1	2	...	...
9	Feb. 6	Oran . . . . .	...	...	1	nil	...	...
10	" 17	Oran . . . . .	...	...	1	nil	...	...
11	" 21	Bombay . . . . .	...	...	1	4	...	...
12	" 27	Oran . . . . .	...	1	...	nil	1	...
13	Mar. 15	Bombay . . . . .	...	...	1	3	...	...
14	" 31	Bombay . . . . .	...	1	...	34	1	...
15	April 3	Oran . . . . .	...	...	1	nil	...	...
16	" 4	Mombasa . . . . .	...	1	...	17	1	Fumigated at previous port (Barcelona)
17	" 7	Oran . . . . .	...	...	1	nil	...	
18	" 9	Bombay . . . . .	...	...	1	5	...	
19	May 20	Oran . . . . .	...	...	1	nil	...	
20	" 21	Oran . . . . .	...	...	1	nil	...	...
21	June 9	Santa Fe . . . . .	...	...	1	9	...	...
22	" 9	Algiers . . . . .	...	...	1	nil	...	...
23	" 29	Karachi . . . . .	...	...	1	nil	...	...
24	July 7	Bombay . . . . .	...	...	1	2	...	...
25	" 11	Bahia Blanca . . . . .	...	1	...	58	1	...
26	" 28	Oran . . . . .	...	...	1	nil	...	...
27	" 31	Mombasa . . . . .	...	...	1	4	...	...
28	Aug. 6	Cyprus . . . . .	...	...	1	nil	...	...
29	" 8	Oran . . . . .	...	...	1	nil	...	...
30	" 9	Basra . . . . .	...	1	...	18	1	...
31	" 11	Karachi . . . . .	...	...	1	6	...	...
32	" 14	Oran . . . . .	...	...	1	nil	...	...
33	" 18	Oran . . . . .	...	...	1	nil	...	...
34	" 18	Rangoon . . . . .	...	1	...	nil	1	...
35	" 30	Haiphong . . . . .	...	...	1	nil	...	...
36	Sept. 1	River Plate Ports . . . . .	...	...	1	3	...	...
37	" 5	Oran . . . . .	...	...	1	nil	...	...
38	" 6	Bona . . . . .	...	...	1	nil	...	...
39	" 16	Rangoon . . . . .	...	...	1	nil	...	...
40	" 17	Bombay . . . . .	...	...	1	nil	...	...
41	" 26	Calcutta . . . . .	...	...	1	1	...	...
42	Oct. 13	Syrian Coast . . . . .	...	...	1	nil	...	...
43	" 22	Oran . . . . .	...	...	1	nil	...	...
44	" 22	Alexandria . . . . .	...	...	1	nil	...	...
45	" 25	China Ports . . . . .	...	1	...	17	1	...
46	" 25	Bombay . . . . .	...	...	1	2	...	...
47	" 27	China Ports . . . . .	...	...	1	nil	...	...
48	" 30	Bombay . . . . .	...	...	1	nil	...	...
49	" 30	Karachi . . . . .	...	...	1	nil	...	...
50	Nov. 10	Syrian Coast . . . . .	...	...	1	nil	...	...
51	" 12	River Plate and Rio . . . . .	...	...	1	1	...	...
52	" 18	Oran . . . . .	...	...	1	nil	...	...
53	" 28	Oran . . . . .	...	...	1	nil	...	...
54	Dec. 1	Alexandria . . . . .	...	...	1	nil	...	...
55	" 30	Alexandria . . . . .	...	...	1	nil	...	...
			...	9	46	393	9	...

Form D.

Vessels other than those dealt with in Form C. subjected to measures of Rat Destruction.

No. of Vessels Fumigated by SO ₂ .	No. of Rats killed.	No. of Vessels Fumigated by H.C.N.	No. of Rats killed.	No. of Vessels on which trapping or poisoning was employed.	No. of Rats killed.	No. of Fumigation Certificates "Port 10 and 11."	Other Certificates.	Remarks.
...	...	48	650	23	69	57	13	Ropes and hawsers Rat-guarded.

*Port Sanitary Inspection—Annual Statement.**Year 1930.*

Ships boarded and inspected	1201
No. of re-visits made	857
No. of nuisances discovered	6,112
No. of nuisances abated	6,034
No. of communications written	40
No. of Notices served	78
No. of verbal warnings	284
No. of ships fumigated or otherwise treated for vermin by owners	122
No. of fumigation certificates granted	70
No. of ships fumigated for U.S.A. Certificate . . . . .	...
No. of International Fumigation Certificates granted	57
No. of International Exemption Certificates granted	127
No. of Local Fumigation Certificates granted	13
No. of rats exterminated	1,267
No. of ships provided with rat guards	874
Notices of regulations served upon Masters or Officers in charge	708
V.D. Pamphlets distributed on behalf of the B.S.H. Council	708
No. of rats submitted for bacteriological examination	57

Nuisances Discovered.

Dirty floors, tables, decks, etc.	940
Dirty bunks and bedding	1,283
Dirty partitions and ceilings	549
Dirty lockers	761
Foul closets and latrines	426
Foul wash-basins	137
Foul sinks	45
Foul baths	20
Choked scuppers	111
Choked and defective latrines	40
Choked and defective wash-basins	52
Choked and defective sinks and baths	16
Obnoxious odours	14
Accumulations of garbage, refuse, etc.	351
Dirty fresh water tanks	169
Dirty and offensive bilges	516
Dirty galleys, food stores, pantries, etc.	161
Dirty wash places	99
Dampness in quarters	5
Insufficient light and ventilation	7
Ships without rat guards	78
Presence of rats and mice	87
Presence of cockroaches and beetles	73
Presence of bugs and fleas	89
Presence of flies	7
Miscellaneous	76
Total	6,112

In the execution of the duties of Port Sanitary Administration much valuable assistance has been received from H.M. Immigration Officer, H.M. Collector of Customs, the Leith Dock Commissioners, the Granton Harbour Officials, and the various shipping companies and agents in the Port, for which our thanks and appreciation are tendered

A. M. M. GRIERSON, M.D., D.P.H.,
Assistant Medical Officer of Health and Port Medical Officer.

ALLAN W. RITCHIE, F.R.San.I., F.R.S.E.
Chief Sanitary Inspector.

FACTORY AND WORKSHOP ACTS.

REPORT BY WORKSHOPS INSPECTOR.

Workshops.—Sec. 132 of the Factory and Workshop Act, 1901 requires every Medical Officer of Health in his Annual Report to report specially on the administration of this Act. The tabular statements given on pages 117–118 show the nature and amount of work performed during the year under review. These statements are in addition to, and supplement the statistical information annually forwarded to the Home Office.

The clearance of slum areas and the creation of healthy conditions in the home rightly receive a large share of attention from local authorities, but improvements in the conditions of our factories and workshops are also important, for the home and factory react on each other. The observant visitor to many factories and workshops, large and small, is bound to be struck with the efforts that are being made to attain hygienic perfection, and while great advances have certainly been made it is well to state that there is still room for further improvement. With some firms the supervision of working conditions relating to heating, lighting, ventilation, sanitation, and cleanliness is often nobody's job, although the cumulative effect of a low standard in these matters is profound.

A topic to which, of recent years, more and more attention has been given is the question of personal hygiene amongst the workers. It is very desirable that, as far as lies within their power, employers should encourage habits of cleanliness by providing suitable accommodation where employees may wash before meals and before leaving the workshop. Washing facilities are required by law in certain classes of factories, but in the more modern building the employer thinks not only of specific dangers to health but of the general amenity of the workers, and does everything possible to raise the standard of personal hygiene.

Bakehouses.—In the baking industry extraordinary advances have been witnessed in the standard of hygiene and cleanliness during recent years, both as regards equipment and premises. This is reflected in the large modern bakehouse of to-day, but there are other places, such as "Underground Bakehouses" where it is difficult to procure anything like a satisfactory standard of cleanliness.

In the majority of instances, these places are old established and are usually found in somewhat ancient buildings; consequently it is extremely difficult to bring them into line with present-day standards. The premises are below the street level, generally underneath the shop, and the manifold operations of the bakehouse are carried on under very cramped conditions. With the passing of time and the effect of mass production by the large factory bakehouse, the number of these "underground" places is steadily decreasing. They are being replaced by the well-equipped bakery with modern machinery in premises having white tiled walls and bread rooms which are models of cleanliness.

In common with other industries, baking traders are making a more extensive use of electricity and are thus assisting in the campaign for smoke abatement. At the present moment, however, most bakeries employ fuel-fired ovens, some being coke fired, some coal fired, a few oil fired, and a proportion gas fired. It is obvious that the fumes from these ovens assist in polluting the atmosphere in the environment of the bakeries. During the last few years, however, a number of bakeries have installed electric baking ovens, the advantages of which are manifold. As compared with fuel-fired ovens, the electric oven saves at least one third of the floor space in the bakery and increases the working accommodation for the operative. Further, no fuel has to be stored, resulting in an elimination of dirt, dust, and kindred inconveniences. In addition, the operatives are able to breathe a much purer atmosphere. There is an absence of fumes, and further, the radiated heat is less than in the majority of fuel-fired ovens. This in turn gives greater comfort to the operative. There is no doubt that the electric oven is a substantial contribution to air purification and

the hygienic production of food, and further advances in this direction may be expected in the near future.

A new feature which has recently shown itself and which is apparently growing steadily is the establishing of small "home bakeries" throughout the City. These are small shops where in a back room a Portable Oven, Hot Plate, or Gas Cooker is fitted up for the baking of pastries or "small" bread. While some of these premises are controlled under Factory Act legislation on the same footing as an ordinary bakehouse, others are outside the Act by reason of the fact that the premises do not fall within the definition of a Workshop, the occupier working alone without employing workers. All such "home bakeries" are, nevertheless, regularly inspected to ensure that the conditions under which food is manufactured are satisfactory from a public health point of view.

Home Work (Outworkers).—Certain classes of work done in the homes of workers are controlled by the Factory and Workshop Act, 1901. The object of this supervision is to prevent work being done in insanitary dwellings, or in premises where there is dangerous infectious disease. Employers of outworkers, and the contractors employed by them, are required to keep lists of their Outworkers and to send to the local authority on or before 1st February and 1st August in each year copies of such lists. The home-workers resident in the City are kept under supervision, and the names and addresses of those workers who reside in other districts are forwarded to the Medical Officer of Health concerned.

Total Number of Inspections of Factories and Workshops	1,732
Number of Written Notices served	109
Complaints received from H.M. District Inspector of Factories, as remediable under the Public Health Act, but not under the Factory Act	1
Complaints <i>re</i> Sanitary Accommodation (Structural Work) for Factories and Workshops; Intimations received by Local Authority from District Inspector of Factories, in order that the Council may have opportunity of enforcing any additional conditions under Local Acts—Work carried out, inspected, and reported upon	2
Notices received from H.M. District Inspector of Factories (for the information of Local Authority) <i>re</i> Bakehouses—Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921	3
Miscellaneous Complaints :—	
Received from other Departments	4
Anonymous	2
Received from Public	10
	— 16
Matters referred to H.M. District Inspector of Factories for his attention	9
Number of Notices of Occupation of Workshops received from H.M. District Inspector of Factories for the year 1930	28

HOME WORK—LIST OF OUTWORKERS.

	Feb. 1930.	Aug. 1930.
Number of Lists received	39	42
Number of Addresses of Outworkers in Edinburgh	73	72
Number of Addresses transmitted to other Authorities	22	17
Number of addresses received from other Authorities	5	3
Actual number of Outworkers on Register, at date of last Returns . . . . .	...	83

CLASSES OF WORK ENGAGED IN BY OUTWORKERS IN EDINBURGH.

- (1) Making, altering, repairing, etc., of Wearing Apparel.
- (2) Making up, finishing, and repairing of Table Linen, etc.
- (3) Rug Making.

TABLE showing the distribution of Workshops throughout the City, the neglects and defaults found and remedied, and the general sanitary improvements in 1930.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.	XX.	XXI.	XXII.	XXIII.	Corstorphine and Craigmond.	Total.
Number of Workshops on Register at 31st December 1930	41	31	41	54	48	27	92	24	54	215	120	30	80	26	27	40	36	19	29	11	9	19	1127		
Number of Inspections made	52	38	46	57	58	28	99	30	63	240	134	37	99	21	31	48	45	20	35	10	12	14	1280		
Walls and Ceilings of Workshops (or parts) cleansed	2	4	2	2	3	..	12	1	6	4	16	4	3	1	..	3	3	3	2	..	4	..	72		
Floors, Windows, &c., of Workshops cleansed	..	1	3	2	3	1	2	..	5	8	5	..	2	..	..	..	3	..	..	..	1	..	36
Water Closet Apartments cleansed and linewashed	..	1	..	..	1	..	1	..	..	5	..	..	..	..	..	..	1	..	..	..	..	..	8
Water Closets cleansed	..	..	2	..	3	..	1	..	..	2	1	..	..	..	..	..	..	1	..	..	..	..	10
Accumulations of refuse removed	1	..	1	1	1	..	..	..	1	2	2	..	..	2	..	..	..	..	..	..	1	..	9
Miscellaneous Nuisances—Dampness excluded; Dry rot remedied, &c.	1	1	..	1	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	8
Adequate Ventilation not maintained	..	1	..	..	..	1	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..	..	7
Improved Lighting and Ventilation provided	..	1	..	..	1	..	1	..	4	1	..	2	..	..	..	..	..	..	..	..	..	..	10
Gas Stoves for heating irons, or other gas appliances, ventilated	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Roofs, Walls, Ceilings, Floors, Windows, Doors, Stairways, &c., general repairs effected	1	..	1	..	1	..	5	..	2	1	2	2	3	..	1	2	..	..	..	..	..	..	21
Walls, Floors, Doors, Partitions, &c., of Water Closet Apartments repaired	1	..	..	1	1	..	..	..	..	1	1	..	1	..	1	..	..	1	..	..	..	..	6
Sanitary Accommodation provided	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Separate Sanitary Accommodation for sexes provided or access arrangements made to comply with this provision	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	4
Intervening Ventilated Lobbies provided at Sanitary Accommodation	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	3
Water Closets and Flushing apparatus repaired	..	1	..	..	..	..	..	..	1	..	2	..	..	..	..	..	1	2	..	..	..	..	7
Water Closet pedestals renewed or "pan" closets replaced by modern apparatus	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	3
Insanitary Water Closets removed	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	2
Water Closets provided with light and ventilation	..	..	..	..	..	..	..	..	2	1	..	..	..	..	3	..	..	..	..	..	..	..	3
Drains, Water-pipes, Rain-water Conductors, Rhones, &c.—choked drains cleansed, and general repairs or renewals effected	..	..	..	3	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	6
Water Supply or Sink Accommodation introduced	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
"Main" Water Supply introduced	..	..	..	..	1	..	..	1	..	2	..	..	..	..	..	..	..	1	..	..	..	..	1
Insanitary Sinks removed—new fittings provided	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Sinks repaired, new Waste-pipes provided, or Woodwork renewed	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	1	..	..	..	..	5
Wash-hand Basins provided	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2
Matters reported to other Departments for attention	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3
Matters referred to H.M. District Inspector of Factories for his attention	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	3
Abstract of Factory Act not affixed in Workshops—reported to H.M. District Inspector of Factories (Sec. 133)	..	..	..	..	..	..	1	..	1	1	1	..	..	..	1	..	1	..	..	..	..	..	6

TABLE showing the distribution of Bakehouses throughout the City, the irregularities and defects found and remedied, and the general improvements in 1930.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.	XX.	XXI.	XXII.	XXIII.	Corstorphine and Cramond.	Total.
Number of Bakehouses on Register at 31st December 1930 :—	4	6	9	5	8	8	5	4	6	7	7	10	9	13	12	9	8	8	4	5	3	2	2	154	
Underground	3	2	3	4	5	2	2	..	2	5	3	5	5	7	6	5	4	3	..	1	..	..	..	67
Level	1	4	6	1	3	6	3	..	4	2	4	5	4	6	6	4	4	5	4	4	3	2	2	87	
Factories	3	3	7	5	6	7	4	4	6	3	4	8	8	9	5	7	7	5	3	5	1	2	2	114	
Workshops	1	3	2	..	2	1	1	..	..	4	3	2	1	4	7	2	1	3	1	..	2	..	..	40
Premises converted into Factories during the year by the introduction of Electrical Machinery . . . . .	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	3
Number of Inspections made	14	14	21	26	18	19	12	9	20	21	20	29	23	41	36	22	17	20	11	10	5	4	6	418	
Electric Lighting installed in Underground Bakehouse . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
Internal Structural Alterations carried out in Bakeries giving improved conditions	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	3
Miscellaneous Improvements for storage of fuel, &c. . . . .	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	4
Floors (relaid or repaired), Walls (internal and external), Ceilings, Roofs, Windows, Doors, Stairways, &c., of Bakehouses and W.C. Apartments—repairs effected	1	4	3	2	..	..	..	..	..	5	9	1	5	4	6	2	1	1	..	..	..	..	3	47
Improved Lighting and Ventilation provided	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	3
Statutory Period for Linewashing exceeded, or Linewashing unsatisfactory . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	24
Dirty Courtyards, Floors, Windows, Furniture, Fittings, &c.	2	1	4	2	1	1	3	1	1	3	1	2	2	3	1	2	4	3	3	..	1	1	..	42	
Dirty W.C. Basins and Floors . . . . .	..	..	1	..	1	1	..	..	..	..	..	..	..	2	5	5	..	2	..	1	..	..	..	4
Bakehouse Insect Pests exterminated . . . . .	..	..	..	1	1	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	6
Accumulations of refuse or old scrap material (wire trays, tins, &c.) removed . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	1	..	..	..	..	..	5
Miscellaneous Nuisances or Complaints—Smoke from Bakehouse flue, Dry rot, Offensive smells, fumes, &c. . . . .	..	..	..	1	1	..	1	..	2	..	3	..	..	..	1	..	..	..	..	1	..	..	..	10
Washing Facilities for workers provided in Bakehouses . . . . .	..	..	..	1	1	1	..	..	1	1	1	3	3	..	1	..	..	..	..	1	1	..	..	13
Hot Water Service laid on to fittings serving as Washing Facilities . . . . .	..	..	..	..	..	1	1	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	4
Wash-hand Basins or Sinks renewed or additional ones installed	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	4
"Main" Water Supply introduced . . . . .	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	1	..	..	..	..	..	..	..	5
Drains, Water-pipes, R.W. Conductors, &c., repaired . . . . .	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	..	..	..	3
Sinks repaired, new Waste-pipes provided or fittings improved	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	..	..	..	..	..	5
{ Removed to more sanitary situation or intervening Ventilated Lobby provided Additional accommodation introduced . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1
Sanitary Accommodation	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3
{ Defective W.C.'s or Flushing Apparatus Water Closet apartments provided with light and ventilation . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1
Matters reported to other Departments for attention	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2

SANITARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, May 1931.

To
*The Department of Health for Scotland and
The Right Honourable the Lord Provost,
Magistrates, and Council of the City of Edinburgh.*

MY LORD PROVOST AND GENTLEMEN,

I have the honour to present the Annual Report of the Sanitary Department of the City of Edinburgh for the year 1930.

HOUSING.

Improvement or Clearance Schemes.—The Department of Health Inquiry into the St. Leonard's (Second Section) Improvement Scheme was held on 10th February 1930, but owing to various prolonged negotiations the Confirmation Order was not issued until 30th January 1931.

This scheme as confirmed, deals with 1,544 houses and affects a population of 5,375 persons. It was possible, due mainly to the Corporation's new procedure, to reduce the time spent at the Inquiry to two days as compared with six or seven days in the previous schemes. The submission of written statements by the objectors, however, entailed a more minute inspection by the Commissioner on his visits to the properties, and this occupied a considerable amount of time.

While no new clearance schemes were promoted during 1930, a large amount of preparatory survey work was undertaken. As required by the provisions of the Housing (Scotland) Act, 1930, Section 22, a survey of the whole City was made and this helped the Local Authority to formulate their programme of re-housing for the next three years. Various areas throughout the City were classified as suitable clearance areas and an order of precedence for their treatment was provisionally prepared.

The total number of houses so earmarked is 5,199, existing in various Wards as follows:—Canongate—1,444, St. Stephens—124, St. Andrews—501, St. Giles—845, George Square—466, South Leith—232, North Leith—1,142, West Leith—377, Central Leith—68. This number is exclusive of the remaining parts of St. Leonard's district and smaller groups in other Wards.

As the conditions in the Canongate Ward, taken collectively, are perhaps the worst existing in the City, and in most urgent need of attention, the Corporation has decided to deal with this Ward first on the understanding that small areas in other districts may also be dealt with where, owing to a high infantile mortality and other circumstances, there is urgency. In the Canongate area, as in previous schemes, the evils resulting from haphazard and indifferent planning and arrangement of buildings are readily apparent and together with the over-subdivision in the majority of the tenements, contribute to the high density of approximately 145 houses per acre in respect of the 1,444 houses falling to be dealt with. Many of the houses are in a dilapidated condition and in a few instances, in consequence of this, they have already been voluntarily closed by the owners.

This survey has shown that, while the Corporation has already done much to root out the congested and insanitary areas in the City, a great deal yet requires to be done, and it will take several years of concentrated effort before the work which remains

is completed. The three years' programme, under which the Local Authority proposes to build 1,500 houses per annum, 750 of which are to be reserved for tenants dispossessed from clearance areas, should materially assist in easing the situation, and if this rate of progress is maintained, the congested and insanitary parts of the City will be very greatly reduced.

The removal of the tenants from the houses in the schemes previously confirmed has been practically completed. All the tenants in the Cowgate-Grassmarket and Leith schemes have been removed, while only 15 remain in the Canongate-Corstorphine scheme, and only 6 in the St. Leonard's (First Section) Scheme. Many of the old buildings have been demolished and in some instances groups of new houses have been erected or are in course of erection upon the cleared sites, while in others the sites have been left vacant thus providing "lungs" to the neighbouring properties.

Revisiting those cleared areas it is difficult to visualise the fact that so much congestion previously existed there, and the marked nature of the change together with the advantages now enjoyed by the former occupiers at the new housing areas, are gratifying evidences of the benefits resulting from those schemes.

Supervision of re-Housing Areas.—The new houses in the re-housing areas have been kept under constant supervision by the Women Sanitary Inspectors, with a view to having them kept clean and in proper order, and to prevent overcrowding and sub-letting. The improvement in the general conditions, brought about by this regular and systematic visitation, continues. In a few cases, however, there is still room for betterment, although it is encouraging to observe how the majority of the tenants have responded to their new environment. Altogether 5,726 visits were made to these houses.

Individual Uninhabitable Houses.—In addition to the survey of the City in connection with proposed clearance areas, inspection was made of 155 houses under the Inspection of District Regulations (Scotland), 1928, and 39 were represented to the Local Authority with a view to the making of closing orders, which were made in 26 instances.

The closing of individual uninhabitable houses has become very difficult in view of the fact that tenants are unable to find other accommodation. A survey is at present being made to ascertain the number of individual houses unfit for habitation, apart from those which will be included in future clearance areas, and as the total number will probably be between two and three thousand, some scheme of alternative accommodation for the tenants of these houses will require to be considered in the near future.

Housing Repairs and Improvements.—The provisions of the Housing (Scotland) Act, 1925, under which owners were required to execute repairs and improvements to working-class houses to make them fit for habitation, have been substantially reproduced in the new Housing Act of 1930. The principal difference is that under the new Act the Local Authority must satisfy themselves that the dwelling-house "is capable at a reasonable expense of being rendered fit for human habitation," and in determining this, "regard shall be had to the estimated cost of the works necessary to render it so fit and the value which it is estimated that the dwelling-house will have when the works are completed."

No guidance, however, has been given as to what expense may be considered reasonable in rendering a house fit, nor what relation there should be between this expenditure and the value of the house when the works are completed. Thus another obstacle has been added to those already encountered in administering these provisions of the Housing Acts.

In connection with many tenemental properties which are considered to be in need of improvement, various difficulties have been experienced in having the work proceeded with. Besides the need for the execution of repairs, the properties frequently

suffer from over-subdivision, the back-to-back arrangement of the houses and the inadequacy of sanitary accommodation. These conditions require replanning of the flats, and as several owners are frequently involved in connection with the houses on each flat, this work cannot readily be accomplished. Another circumstance which has retarded progress is the delay occasioned, in some instances of several months after plans have been approved, in the rehousing of tenants who require to remove to permit of the work being carried out. The delay applies in particular where houses are being combined in order to reduce the original number of houses. In spite of the aforementioned difficulties the work of improving properties has steadily gone on. The following are examples of the work done in various parts of the City :—

(1) A Notice was served on the owner of a property, which consisted of two houses—one of three apartments and one of two apartments—situated over shops and having an outside common watercloset, requiring him to provide watercloset accommodation etc., within each house. After consideration, however, he decided to have the tenants removed and to combine the two houses. The effect of this alteration was to make a modernised five-apartment house, provided with bathroom, larder, press accommodation, electric light and new grates.

(2) The owner of a tenement was required to substitute modern waterclosets for an insanitary type which were situated in dark, unventilated bathrooms in internal positions, and also to renew soil and waste pipes and drains. At the same time it was pointed out to the owner that the occasion was opportune for considering the formation of new bathrooms, six in all, next the outer wall and provided with windows. A plan was shown him whereby this improvement could be made without seriously reducing the size of any of the rooms in the houses. Accordingly, this work was successfully carried out and has considerably improved this property. The old bathrooms, after being gutted, have been fitted with shelving and converted into lumber rooms.

In addition to work of a more substantial nature, as described above, repairs were executed upon numerous houses to render them fit for human habitation. These included repairs to 255 floors, hearths, doors, partitions, etc. ; 195 walls and ceilings ; 197 windows and skylights ; 79 defective roofs ; 77 grates or ranges and 66 coal bunkers. Dampness was abated in 57 houses.

The financial position of owners presents considerable difficulty in having structural improvements effected and if the standard of equipment in houses is to be raised, it would appear that the whole economic question, as it affects house property, will require serious consideration.

Rural Housing Improvement.—Advantage was taken of the provisions of the Housing (Rural Workers) Act, 1926, by the owners of 32 farm and other rural cottages and the improvements effected consisted of the provision of bathrooms, sculleries, drainage, improved lighting and repairs to floors, walls, roofs etc. Work is also in progress at other cottages in the outlying districts of the City and improvements are under consideration in connection with a further number of cottages.

In order to ascertain the conditions of cleanliness in the dwellings of farm workers, visits were paid by the Women Sanitary Inspectors to the cottages of these workers in the districts of Liberton, Corstorphine, Colinton and Cramond. In all, 287 visits were made. On the whole a good standard of cleanliness was found, although in a few cases the conditions were unsatisfactory. Revisits, however, revealed considerable improvement.

NUISANCES AND SANITARY IMPROVEMENTS.

Continued advance was made in improving the sanitary arrangements of those houses which were inadequately provided with suitable conveniences. Thus, in 187 instances new waterclosets were introduced either to make up a deficiency or to replace

those of antiquated type, and 304 were improved or repaired ; 182 earthenware sinks and tubs were introduced either where these were absent or to replace defective appliances, and repairs to woodwork, etc., around sinks were effected in 298 instances ; renewals or repairs of drainage were effected at 32 properties, and 55 soil pipes, 127 waste pipes, and 74 rainwater conductors were repaired or renewed.

Carelessness in the use of sanitary appliances, particularly those used in common by a number of tenants, is frequently the cause of nuisance and damage to property. No less than 224 choked waterclosets, 124 choked sinks, wash-tubs, etc., and 649 choked drains had to be brought to the notice of the parties responsible and cleared.

The Table showing the number of sanitary conveniences used in common has been brought up to date as follows :—

	Number used in common by the Tenants of										Total Number of Conveniences.	Total Number of Houses.
	2 Houses.	3 Houses.	4 Houses.	5 Houses.	6 Houses.	7 Houses.	8 Houses.	9 Houses.	10 Houses.	16 Houses.		
Common Waterclosets	4,453	1,441	764	120	52	3	4	...	...	...	6,837	17,250
Common Sinks . . .	353	318	198	51	19	5	2	...	...	...	946	2,802
Number of houses without Sink or water supply within the house and without the use of a common Sink . . .	...	...	...	...	...	...	...	...	...	...	...	776
Dry Closets . . .	115	9	5	2	...	...	...	...	...	...	131	287
Privy Middens . . .	...	...	...	...	...	...	1	...	...	6	7	104
Ashpits . . .	19	8	9	5	5	1	2	1	2	...	52	205

There still remain 348 dry closets (inclusive of the number referred to in the above table as being used in common) and 7 privy middens. There is a decrease of 11 dry closets as compared with last year. These conveniences are mostly situated on the outskirts of the City where sewers have not been provided. On account of the demolition of property under the various housing improvement schemes, and improvements effected at other properties, the number of houses where waterclosets were used in common was reduced by 90 and the number where sinks were used in common was reduced by 11. The number of houses without sink or water supply within the house and without the use of a common sink has been reduced by 48.

Defective or obstructed vents giving rise to smoke in 123 houses were improved ; and nuisances arising from escapes of gas, dead vermin, etc., were remedied in 96 houses. Flooding in houses was found in 51 cases to be due to defects in flats above or to burst pipes.

Complaint of nuisance committed in common stairs and backgreens by dogs and cats was made on 166 occasions, and on 41 occasions to the keeping of animals and poultry within, or in close proximity to dwellings.

In the course of the inspection of dwelling-houses, the floors and bedding in 178 instances were found to be in a dirty condition and the tenants were required to carry out the necessary cleansing. In 283 houses the walls and ceilings required distempering, papering or painting.

Marked improvement is revealed in the cleanliness of dwelling-houses. The campaign of house to house inspection and education in hygiene is having its effect and not only are the conditions of cleanliness improved, but there is a greater tendency to adopt lighter colours and more artistic wall-papers which have gratifying effects in brightening the interiors of the homes.

A survey of the common stairs throughout the City and the service of notices upon the owners where painting was required resulted in 1,377 staircases being painted. The sweeping and washing of stairs and passages was found in 2,059 instances to have been neglected and insistence had to be made on compliance with the regulations.

Unfortunately the practice of casting garbage out of windows on to back-courts, areas and roofs of outbuildings, and the depositing of refuse in cellars, vacant houses and other odd corners, continues. In all 3,764 accumulations of garbage and filth in those places had to be removed either by the owners or the Cleansing Department.

Warnings were given to the occupiers concerned and in one case a prosecution was taken in the Police Court against an offender. This was a second offence and a fine of One Pound was imposed.

Ticketed Houses.—These small houses, as well as the other houses that are unticketed in the same tenements, are visited periodically by the Women Sanitary Inspectors. Over a period of years, as a result of this supervision, steady improvement has been effected in the domestic conditions. In the course of visiting opportunities are often afforded the Women Inspectors of giving help, advice and encouragement, which is greatly appreciated. Altogether 15,165 visits were made.

Overcrowding.—During the year the total number of recorded cases of overcrowding was 1,360, this being an increase of 167 compared with last year. In 275 instances the overcrowding was abated, leaving 1,085 overcrowded houses still to be remedied at the end of the year.

While much of the overcrowding was caused by the size of the family in residence, in 199 cases it was either due to or aggravated by the keeping of lodgers or the sub-letting of rooms to other families.

Of the 1,360 overcrowded houses found, 866 were of one apartment, 474 of two apartments and 20 of three apartments and over.

In the one-apartment houses the overcrowding in 205 instances was by one person, in 326 by 2 persons, in 208 by 3 persons, and in 127 instances by 4 or more persons in excess of the number allowed.

In the two-apartment houses the overcrowding in 132 instances was by one person, in 143 by 2 persons, in 91 by 3 persons, and in 108 by 4 or more persons over the number allowed.

The three-apartment houses were in 3 instances occupied by one person in excess, 3 by 2 persons, 6 by 3 persons and 8 by 4 or more persons.

In the one-apartment overcrowded houses as many as 7 to 13 persons were found in residence, and in the two- and three-apartment houses as many as 15, 16 and 17 persons were found.

In 161 instances the air space per person had been reduced to below 200 cubic feet, being less than half of what has been recognised as a very low standard, namely, 400 cubic feet.

In individual cases the air space had been reduced to the extremely low figure of from 90 to 134 cubic feet per person respectively.

The following are a few examples of the conditions that were found :—

(a) A small one-apartment house in Leith with accommodation for one person, was found to be occupied by the tenant, his wife and family, namely, 3 daughters, aged 11 years, 7 years and 2 years and 2 sons aged 9 years and 5 years, making a total of 7 persons.

(b) A two-apartment house in the centre of the City, suitable for 4 persons, was found to be occupied by the tenant, his wife and family, namely, 2 daughters, aged 13 years and 3 months and 10 sons whose ages ranged from 2 to 18 years, making a total of 14 persons.

(c) A sub-let room with accommodation for one person was found to be occupied by a man, his wife and family, namely, 2 daughters, aged 23 years and 12 years, and 3 sons, aged 11 years, 7 years and 4 years, making a total of 7 persons.

Special Overcrowding Survey.—Hitherto, overcrowding has been determined on a cubic space standard, namely, 400 cubic feet per person irrespective of the age of the occupants. As this standard, however, has no regard to the important question of the separation of the sexes, an experimental survey was carried out in the Wardlaw district of the City to ascertain the extent of overcrowding under various standards. These standards were as follows :—

- (1) 400 cubic feet per person.
- (2) Proper sex separation.
- (3) (a) Not more than 2 persons per room, or
(b) Not more than 3 persons per room.

The survey comprised 1,395 houses with a population of 6,051, showing an average of 4·34 persons per house. It was found that 59 houses were overcrowded according to the cubic space standard ; there was want of proper sex separation in 275 houses ; there were more than two persons per room in 417 houses and there were more than 3 persons per room in 79 houses. It was also ascertained that in 248 of the houses where there were more than two persons per room, the overcrowding was associated with the want of proper sex separation. Lodgers were kept in 98 instances and sub-tenants in 96 instances, and this considerably influenced the extent of the overcrowding.

It will thus be seen that over four per cent. of the houses were overcrowded on the cubic space basis ; nearly twenty per cent. had want of proper sex separation ; nearly thirty per cent. had more than two persons per room ; nearly six per cent. had more than three persons per room ; and nearly eighteen per cent. had more than two persons per room in addition to want of proper sex separation.

The overcrowding took place, to a great extent, in the two-apartment houses. Whereas the average number of persons per room in the three-apartment houses was 1·55, and in the four-apartment houses 1·32, that for the two-apartment houses was 2·14.

From the survey it would appear that overcrowding on the standards mentioned must be extensive throughout the City and it is intended to carry out similar surveys in other districts so that an indication of the actual conditions may be obtained.

The survey has shown that the existing standard of determining overcrowding, namely, 400 cubic feet per person, is not sufficient, and that a new standard is required. The fixing of a new standard should include proper sex separation, the number of persons per room and a minimum cubic capacity or floor space per person in such room.

Increase of Rent, etc., Acts.—Eleven applications were received from occupiers of houses for certificates in terms of the Rent and Mortgage Interest (Restrictions) Acts, 1920-23, that their houses were not in all respects in a reasonable state of repair.

In two of the houses the disrepair was such that certificates could be granted, but in the remainder of the houses the extent of the disrepair did not warrant the granting of certificates.

Upon the owners being given notice of the items of disrepair in the respective houses, repairs were effected.

LODGING HOUSES.

Common Lodging Houses.—At the beginning of the year there were 16 common lodging houses in the City with accommodation for 2,087 lodgers. Thirteen of these houses were used to house male lodgers and three were reserved for female lodgers. All the lodging houses are privately owned with the exception of one situated in Leith which is owned by the Corporation.

During the year an application for an additional lodging house for women was sanctioned by the Public Health Committee, and an application for lodging houses for males was disapproved, the proposed premises being unsuitable.

In one of the old lodging houses structural alterations, internal improvements and additions were carried out, resulting in 29 additional beds being approved; in another house 3 additional beds were sanctioned; while in one house the accommodation was reduced by 3 beds.

All the lodging houses were regularly inspected by day and night and any irregularities discovered immediately intimated to those responsible.

At the end of the year there remained on the Register 17 common lodging houses providing accommodation for 2,159 lodgers.

Farmed-Out Houses and Houses Let-in-Lodgings.—By a steady process of supervision and strict insistence on the observance of the Bye-Laws the number of farmed-out houses has been gradually reduced. In 1900, there were 368 houses with accommodation for 978 persons. By 1920, these had been reduced to 232 with accommodation for 838 persons, and the number has now fallen to 72 houses providing accommodation for 259 persons. As usually conducted this is a very undesirable type of lodging and it is hoped further to reduce the number within the current year.

The houses let-in-lodging in the City at the beginning of the year numbered 18 with accommodation for 652 persons. During the year one house accommodating 16 persons was added to the Register and one house with accommodation for 20 persons was removed from the Register, the occupier having discontinued its use for this purpose.

Accommodation for Seasonal Workers.—The number of farmers employing seasonal workers last summer was 18, and the number of workers was approximately 373. The workers are accommodated in huts or barns which before being used must comply with the requirements of the Byelaws. Visits were regularly paid by the Inspectors, both by day and by night, to ascertain if the Bye-laws were being observed, and any irregularities were brought to the notice of those responsible and immediately rectified.

PLACES OF PUBLIC ENTERTAINMENT.

The picture houses, theatres and other places of public entertainment were regularly visited by the Inspectors and it was found that a high standard of cleanliness and sanitation was being maintained in the majority of cases. Any matters found wrong were brought to the notice of the management who took immediate steps to have these remedied.

The atmospheric conditions in several of the picture houses, etc., were tested by means of the Kata-thermometer and, as a rule, conditions were found to be quite satisfactory, although there was a tendency in some places to keep the temperature too high, especially on cold nights. Although it may feel very comfortable for patrons to come into a warm building from the cold outside-air, yet the reverse is the case when they leave. To have a temperature of about 70 degrees Fahrenheit is too high when the outside temperature is in the region of 35 degrees or 40 degrees Fahrenheit. A more comfortable temperature, and one which should be aimed at by the management of all places of public entertainment, is from 60 to 62 degrees Fahrenheit and this is just as easy to attain as the higher temperatures.

VERMIN REPRESSION.

Verminous children.—During the past year 219 cases involving 330 children were notified by the Education Committee and in connection therewith 94 beds and 326 sets of personal clothing were disinfected and 247 children were bathed at the City Disinfecting Station.

Verminous Houses.—The Department again co-operated with owners and occupiers of other vermin-infested houses, and 280 houses were dealt with entailing the removal of 38 sets of bedding to the City Disinfecting Station.

It is pleasing to record that a number of tenants who were removing from slum dwellings to new housing areas enlisted the aid of the Department in having infested household effects treated before going to the new houses.

Rat Destruction.—The extermination of the rat pest again received constant attention. During the year 276 complaints were investigated. Revisits were made to all the infested premises from time to time, and 193 premises were cleared of rats.

Every endeavour was made to secure the co-operation of occupiers of premises in exterminating the vermin, and the Department gave advice and assistance when required.

In vacated slum areas, new housing schemes, banks of streams and various embankments, no less than 12,119 poison baits were laid during the year.

As in former years the Local Authority co-operated with the Department of Agriculture in an intensive campaign for rat destruction during the week 31st March to 5th April, with most gratifying results.

Frequently when dealing with complaints of rats, it is found that householders are in the habit of throwing bread and food over their windows. Although these people intend the crumbs for birds, they are actually encouraging the vermin.

As in many cases it was found that the rats invaded premises from the drains and sewers, it became necessary to have these examined by the Burgh Engineer's Department, whose services in this connection have been of great value.

SMOKE ABATEMENT.

One of the most serious problems confronting sanitarians, and one which has an important bearing on the health of the community, is the continued pollution of the atmosphere by the smoke from industrial and domestic chimneys. Custom has probably prevented the people of this country from realising the folly of permitting the air they breathe to be so grossly charged with smoke and its associated injurious gases. Public opinion, however, is being gradually awakened and demands are being more insistently made for the discontinuance of this harmful practice. Fortunately this is being made more possible of realisation by improvements in industrial furnace plant and by the more extended use of smokeless fuels in domestic fireplaces. Progress, however, is all too slow, and efforts are being made in various directions to have it accelerated.

In a City like Edinburgh, which is largely residential, and is visited annually by many people from all parts of the world, the need for improving the purity of the atmosphere is all the more important. Fortunately, in its efforts to reduce the smoke emissions to a minimum, the Department has been wonderfully well supported by industrialists and owners of various public buildings, and any suggestions made have, as a rule, been readily given effect to.

Daily supervision is made of the chimneys of the various works and visits are paid when necessary to the boiler-houses, and the firemen instructed or warned. The number of these visits averages about 300 per month.

The improvements effected upon boiler plant during the year were as follows :—

New steam boilers installed to give increased power	7
Mechanical stokers fitted to steam boiler furnaces	7
Secondary air smoke-preventing apparatus fitted to steam boilers	2
Furnaces in which anthracite, coke, or other non-bituminous fuel has been substituted for ordinary coal (This includes public offices, banks and similar institutions)	20
Furnaces adapted for consumption of oil fuel	4
New chimneys erected or existing ones heightened to give increased draught	17
Other improvements to furnaces	2

Eighty complaints were received from the general public during the year. A number of these referred to smoke from low chimneys adjacent to dwelling-houses, and improvements were, in some cases, effected by the heightening of the chimneys, and, in others, by substituting coke for ordinary coal. The use of coke in place of ordinary coal is recommended in heating furnaces of the “ Robin Hood ” type, of which there is a large number in use for central heating in hotels, clubs, insurance offices, banks, etc. Already much has been done by this means in the central parts of the City to lessen the volume of smoke. The use of coke has also been found practicable in steam boilers of a larger type and in two cases this has been the means of remedying long-standing complaints.

The various railway depots and stations have received special attention. Notices have been posted by the companies at those places warning engineers and firemen, and any offender is reported direct to the Yard Superintendent and dealt with by him.

The numerous locally-owned steam wagons using the public streets are now, as a rule, fired with semi-bituminous coal which renders them almost smokeless ; but there are many others which come into the City from outlying districts which are not fired in this way and these require constant supervision.

As regards the smoke from domestic fires, while the total volume is still large and forms the greatest proportion of the smoke in Edinburgh, there is a perceptible diminution year by year, doubtless due to the extended use of gas and electrical appliances. The cheapening of these fuels and the improvements made in cooking and heating appliances, besides the advantages in domestic cleanliness, have greatly encouraged their more general use.

In this connection it is interesting to note the progress made in the introduction of gas and electrical appliances, and in the consumption of these smokeless fuels during the past 10 years. The number of gas cookers on free loan, hire, hire-purchase and sold outright had increased from 21,651 in year 1920 to 42,195 in 1930. Gas fires and radiators on hire, hire-purchase and sold outright had increased from 8,363 in 1920 to 21,050 in 1930. Those figures do not include the private gas-consuming appliances in use and it is estimated that these are almost equally numerous.

Although it is difficult to state the figure precisely it is estimated that the amount of gas used in gas cookers and fires has replaced approximately 80,000 tons of coal per annum for domestic purposes.

The total gas sold for all purposes was 2,196,563,900 cubic feet in 1920, as against 3,101,588,500 cubic feet in 1930, an increase of 905,024,600 cubic feet. This increase is practically the equivalent of the output of both Paisley and Greenock added together. The gas sold for trade rate was 194,736,700 cubic feet in 1920, and 272,230,800 cubic feet in 1930, an increase of 77,494,100 cubic feet.

In addition the amount of coke produced in the manufacture of gas is 70,000 tons per annum. Of this quantity 40,000 tons are sold locally and used to replace raw coal, the remaining 30,000 tons being shipped abroad. If this latter quantity could be used locally it would be a further contribution to smoke abatement.

The increase in electric radiators and cookers is approximately coincident with the increased consumption of electricity for domestic purposes, and whereas 1,797,309 units were consumed in 1923, the figure had arisen to 14,623,899 units in 1930. The coal burned in domestic consumers' fires corresponding to the 1930 consumption of electricity would be approximately 8,000 tons. A similar figure for the coal corresponding to the industrial power and traction consumptions would be 86,000 tons.

From the point of view, therefore, of diminishing the smoke pollution of the atmosphere every encouragement ought to be given to the increased use of those smokeless fuels. This is a matter in which every householder bears a share of responsibility, and every one should consider what further part he or she can play in the campaign for smoke abatement.

The measurement of the solid impurities of the air of the City is continued by the use of three standard gauges—one at Princes Street Gardens, one at Leith Links, and one at Bruntsfield House, and the following Table shows the results at these places from month to month. The results fluctuate according to the weather, and increase directly with the number of rainy days.

Month.	Station.	Millimetres of Rainfall.	Total Insoluble Matter.	Total Soluble Matter.	Total Solids.	Total Solids.
			Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	English Tons per Sq. Mile.
January .	Leith Links .	95.97	1.96	2.21	4.17	10.68
	Bruntsfield House .	71.69	2.82	2.58	5.40	13.82
	W. Princes St. Gds.	65.21	3.92	2.74	6.66	17.05
February .	Leith Links .	8.55	2.96	1.33	4.29	10.98
	Bruntsfield House .	15.39	2.40	1.84	4.24	10.85
	W. Princes St. Gds.	11.07	5.86	1.15	7.01	17.95
March .	Leith Links .	36.92	2.66	1.98	4.64	11.88
	Bruntsfield House .	57.65	3.02	3.58	6.60	16.90
	W. Princes St. Gds.	43.80	4.21	2.96	7.17	18.36
April .	Leith Links .	23.76	2.74	3.81	6.55	16.76
	Bruntsfield House .	30.37	2.71	1.95	4.66	11.93
	W. Princes St. Gds.	27.60	5.93	2.21	8.14	20.84
May .	Leith Links .	25.38	3.55	1.53	5.08	13.00
	Bruntsfield House .	27.00	3.77	1.35	5.12	13.11
	W. Princes St. Gds.	25.54	6.97	1.74	8.71	22.30
June .	Leith Links .	41.72	4.75	1.50	6.25	16.00
	Bruntsfield House .	41.18	3.29	1.49	4.78	12.24
	W. Princes St. Gds.	44.25	6.41	1.60	8.01	20.51
July .	Leith Links .	83.16	4.02	3.32	7.34	18.79
	Bruntsfield House .	102.74	3.10	2.88	5.98	15.31
	W. Princes St. Gds.	85.14	6.75	5.28	12.03	30.80
August .	Leith Links .	132.03	3.24	5.28	8.52	21.81
	Bruntsfield House .	134.91	3.43	4.05	7.48	19.15
	W. Princes St. Gds.	Bottle	broken.	...	...	...
September	Leith Links .	78.03	2.34	3.74	6.08	15.56
	Bruntsfield House .	93.83	2.52	2.62	5.14	13.15
	W. Princes St. Gds.	128.74	4.35	7.21	11.56	29.59
October .	Leith Links .	64.19	4.39	2.43	6.82	17.45
	Bruntsfield House .	81.00	2.24	2.92	5.16	13.21
	W. Princes St. Gds.	68.50	4.19	3.02	7.21	18.46
November	Leith Links .	71.82	2.30	2.44	4.74	12.13
	Bruntsfield House .	72.70	2.09	2.47	4.56	11.67
	W. Princes St. Gds.	82.24	3.88	3.63	7.51	19.22
December	Leith Links .	35.64	2.36	0.78	3.14	8.03
	Bruntsfield House .	35.11	2.02	0.92	2.94	7.53
	W. Princes St. Gds.	31.12	3.95	0.58	4.53	11.59

As showing the steady improvement in the condition of the atmosphere it is noted that the monthly average amount of impurity expressed in English tons per square mile, collected at the gauge at Princes Street Gardens, has been reduced from 26·08 in year 1927 to 20·60 in 1930. That at Leith Links shows a reduction from 15·03 to 14·42; and that at the Usher Institute from 15·84 to 13·42.

OFFENSIVE TRADES.

The following is a list of the Offensive Trades carried on in the City :—3 tanners, 8 hide and skin factors, 1 gut scraper, 1 glue and size maker, 2 skinners, 1 soap boiler, 3 tripe cleaners, 6 manure manufacturers, and 2 tallow melters, making a total of 27. This is a decrease of one as compared with last year, the business of a fish meal manufacturer having been discontinued.

The works were inspected frequently in order to see that the requirements of the Bye-laws were being attended to.

FOOD SUPERVISION.

Food Handling.—In furtherance of the campaign for the observance of hygienic principles in food handling, a systematic survey was made of places where food is prepared and sold. This showed that while many of the premises are excellently conducted and every effort is made to protect the food from contamination, considerable negligence obtains at many others. The cleanliness, which in places of this kind ought to be one of the first considerations, is not always maintained at a high standard and much carelessness prevails in the needless exposure of food to contamination. The space in many food shops is much too small for the business done and attempts at securing proper cleanliness are negated by the presence of large stocks. Back-shops and cellars are often very badly kept and the sanitary arrangements, if present at all, are frequently unsatisfactory.

An effort has been made by repeated inspection to improve the general hygienic conditions and this has resulted in many of the premises being cleaned and painted, water supply, soap, towels and sanitary conveniences provided, and repairs and other improvements effected. The attention of shopkeepers and their assistants has also been called, as occasion required, to the need for personal cleanliness. As stated in previous reports, however, the sanitary supervision of food premises requires to be reinforced by the application of suitable regulations.

Milk Supply.—The number of registered dairy-keepers, including hawkers, at 1st January 1930, was 484. During the year applications in respect of 10 premises were received, 8 of which were fully registered, one provisionally registered and one registered to sell bottled milk only. In addition, 2 applications for registration from hawkers for the sale of bottled milk were granted. Registration certificates in respect of 13 dairy premises were cancelled, the sale of milk having been discontinued. The total of 483 dairies, including hawkers, at the end of the year showed a reduction of one.

The total approximate daily sale of milk of all classes was 24,217 gallons—equivalent to an average amount of about half-a-pint per person—and of this amount 74 per cent. was sold in bottles. This is 6 per cent. higher than last year.

Deducting the amount of milk supplied in bulk to Institutions, etc., namely, 8 per cent., it is found that there is still 18 per cent. of the total daily supply passed on to the consumer otherwise than in bottles. An effort is being made to have all milk supplied in sterilised bottles.

The amounts of the specially designated milks now sold daily within the City are—305 gallons of “Certified,” 539 gallons of “Grade A. (Tuberculin Tested),” and 70

gallons of "Grade A." In addition, 14,340 gallons of milk are "Pasteurised," although only a small proportion of this is sold under licence, making a total of 15,254 gallons or about 63 per cent. of the total daily sale of milk.

The Local Authority has granted licences to 204 dealers for the sale of the various grades of milk under the Milk (Special Designations) Order (Scotland), 1923, 72 being for "Certified," 55 for "Grade A. (Tuberculin Tested)," 10 for "Grade A," and 67 for "Pasteurised." This is a decrease of 13 from the number for the previous year, doubtless due to the milk business gradually passing into the hands of large concerns.

Ice Cream.—The number of premises registered for the sale of ice-cream is 261.

Twenty-one samples of ice-cream were procured from shopkeepers and street vendors for the purpose of chemical analysis, with a view to ascertaining the quantity of milk fat present, and the City Analyst reported them to contain an average amount of 3.39 per cent. While this compares unfavourably with last year's record figure of 3.62 per cent., yet it represents an article of reasonably good quality, more especially when it is taken into consideration that no minimum Government standard of milk fat has yet been adopted.

PREVENTION OF FOOD ADULTERATION.

During the year, the total number of samples procured for chemical analysis under the Food and Drugs (Adulteration) Act, 1928, was 1,727, being at the rate of 4.06 per 1,000 of the population.

These consisted of 721 statutory and 1,006 informal samples, the former comprising a variety of 78 articles of food and drugs.

As regards the statutory samples, Dr. A. Scott Dodd, B.Sc., Ph.D., F.R.S.E., the City Analyst, reported that 671 or 93 per cent. were genuine and 50 or 7 per cent. were not in accordance with the legal requirements.

Milk.—For obvious reasons, milk receives a greater amount of supervision than any other article of food, the number of samples taken being 154, representing 21 per cent. of the total number of statutory samples, while in addition, 58 samples were procured at shops and railway stations for bacteriological examination by the Veterinary Department, the results of which appear in the annual report of the Chief Veterinary Inspector.

Of the 154 statutory samples, the Analyst reported 125 as being in conformity with the Sale of Milk Regulations, and 29 as being adulterated either by the abstraction of fat or by the addition of water or both.

The average amount of milk fat in all the statutory samples taken, including those certified as being adulterated, was 3.52 per cent., which is considerably higher than the presumptive standard in the Sale of Milk Regulations, viz., 3 per cent. With regard to the samples reported as being deficient, it may be pointed out that the adulteration in the majority of instances was slight, and it was considered expedient to institute legal proceedings against only two of the offenders. In one case the accused was convicted and fined the sum of £20, while in the other the Sheriff returned a verdict of Not Proven.

A point, which will be of interest to Local Authorities, arose in connection with the former prosecution as the Public Prosecutor intimated to the Sheriff that although there were several previous convictions against this dairy-keeper for similar offences he could not take them into account *with a view to having the penalty increased.*

This statement was founded on the terms of Clause 3 of the Third Schedule of the Act, especially the words “unless the former offence or offences were an offence or offences *under the same provision of the Act.*”

As the wording of the clause was certainly ambiguous the opinion of the Department of Health for Scotland was asked, and they intimated that the view expressed by the Public Prosecutor was concurred in by the Department's legal advisers, and that the point had been noted for adjustment at the first suitable opportunity.

The Milk (Special Designations) Order (Scotland), 1930.—As in former years, continuous supervision has been exercised to ensure that the producers comply with the standard prescribed under this Order, and, during the present term, the various supplies arriving in the City have been, with few exceptions, submitted for chemical analysis in every month of the year.

Altogether 217 samples were forwarded to the City Analyst, namely, 108 of “Certified,” 63 of “Grade A. (Tuberculin Tested),” 12 of “Grade A,” and 34 of “Pasteurised” milk.

A detailed statement is submitted showing the number of samples taken in each month of the year under the various designations, along with the average amount of butter fat found present.

Date.	“Certified.”		“Grade A (T.T.).”		“Grade A.”		“Pasteurised.”	
	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.
January . .	9	3·84	6	3·69	1	3·29	3	3·44
February . .	9	4·11	7	3·95	1	4·02	3	3·49
March . .	9	4·04	7	3·63	1	4·08	3	3·73
April . .	11	3·78	5	3·77	1	3·94	3	2·92
May . .	9	3·91	5	3·88	1	4·13	3	3·78
June . .	9	4·09	5	3·83	1	3·82	3	3·57
July . .	9	3·78	5	3·63	1	3·68	3	3·36
August . .	7	3·76	4	3·65	1	3·74	1	3·47
September . .	9	4·21	4	3·73	1	4·09	3	3·66
October . .	9	4·01	5	4·26	1	4·08	3	3·57
November . .	9	4·02	6	4·11	1	3·85	3	3·59
December . .	9	3·98	4	4·04	1	4·00	3	3·72
Total . .	108	...	63	...	12	...	34	...
Average . .	...	3·96	...	3·85	...	3·89	...	3·53

The results of analysis are deserving of comment as the average amount of butter fat found present, in every month of the year, under each designation, was higher than the required standard with only four exceptions, viz., one sample of “Grade A.” containing 3·29 per cent., and three samples of “Pasteurised” milk having 2·92 per cent. of fat.

As to the two principal designations, viz., “Certified” and “Grade A. (Tuberculin Tested),” not only has the Government standard of 3·5 per cent. been exceeded in every month, but in six of these, viz., February, March, June, September, October and November, the “Certified” samples shewed fully 4 per cent. of fat, while in the months of October, November and December the “Grade A (Tuberculin Tested)” milk contained a similar high amount.

The averages taken over the whole year are very satisfactory, viz., “Certified” 3·96 per cent., “Grade A (Tuberculin Tested)” 3·85 per cent., and “Grade A” 3·89 per cent., and are highly creditable to the various producers.

Mince.—It is rather disquieting to report that contraventions under the Preservatives' Regulations in regard to Mince are still too prevalent, and the improvement, which it was reasonable to anticipate from the results of last year, has unfortunately not materialised.

It would appear that a number of the butchers are unable to resist the temptation of still adding preservative in order to enhance the appearance of the mince and retard the discolouration which takes place after it has been kept for some time.

A pleasing feature, however, is the fact that the practice in former years of adding an inordinate amount of preservative is now unusual even during the summer period when a limited amount of preservative is permissible, and it is comparatively rare to meet with the serious infringements which were of frequent occurrence for a period after the inception of the Regulations.

A total number of 52 samples was purchased from butchers throughout the City and the Analyst reported 13 of these as contravening the terms of the Regulations.

Legal proceedings were instituted against 9 offenders, each of whom tendered a plea of guilty and penalties to the amount of £31 : 12s. were inflicted in fines and expenses.

Sausages.—With regard to this popular article of diet, the butchers throughout the district are to be congratulated on the very marked improvement shown during this year in complying with the statutory requirements.

There is a welcome and most satisfactory decrease in the number of samples found to contain sulphur dioxide in excess of the permissible maximum and this notwithstanding the fact that a record number were forwarded to the Analyst for chemical examination as compared with any previous year.

The figures are illuminating, as out of a total number of 87 samples of various kinds of sausages analysed, only 3 of these were not in conformity with the legal requirements. It was found necessary to prosecute one offender, who was fined £2 : 2s. and £1 : 10s. expenses.

Other Foods and Drugs.—Other articles reported on adversely by the City Analyst were as follows:—one sample of fresh butter contained an excessive amount of water; one sample of camphorated oil did not have the requisite percentage of camphor; one sample of ground cinnamon contained a quantity of sand; one sample of lemon squash contained salicylic acid, and one sample of white pepper contained a small quantity of turmeric.

In all cases intimation was made to the vendors and an assurance was given that steps would be taken to avoid a repetition of the offence.

Imported Foodstuffs.—There has been a considerable decrease in the amount of shipping arriving at Leith Docks and a consequent reduction in the quantity of foodstuffs imported during the year.

Altogether 37 samples were procured for the purpose of analysis representing a variety of 15 articles of food, the majority of these comprising canned meats from America and Denmark.

The Analyst reported that, with one exception which contained a small quantity of sulphur dioxide, every sample taken was free from the presence of any preservative.

Tuberculous Infection of Milk.—In connection with the special investigation into the tuberculous infection of milk, which commenced in October last, this Department collected 221 samples of milk for examination comprising 74 samples from producers, 73 of pasteurised milk and 74 from the retail shopkeepers.

THE RAG FLOCK ACT, 1911.

For a considerable period the samples submitted for the purpose of analysis under this Act had been conspicuous for the small amount of chlorine found present and, during the previous two years, every sample taken was found to be not only in conformity with the limit prescribed in the Regulations but of a high standard of cleanliness.

During the present year, however, this record has not been maintained, as out of a total of 10 samples of rag flock procured from various bedding manufacturers throughout the City, 3 were reported by the City Analyst as not complying with the Government standard.

These were found to contain 41, 35 and 32 parts of chlorine respectively per 100,000 parts of flock, while the Regulations demand that no sample shall exceed 30 parts of chlorine.

The results were communicated to the firms in default and after consideration of the explanations received from them it was decided to refrain from instituting legal proceedings, this decision being influenced by the fact that the Analyst was of opinion that the flock in each instance had been subjected to a process of washing. Each offender, however, was warned that any future contravention would probably result in a prosecution.

THE POISONS AND PHARMACY ACT, 1908.

For some years there has been little alteration in the names appearing on the Register which requires to be kept by the Local Authority in accordance with this Act, the applications received being to a great extent for renewals of licences which had been previously granted. There is a slight increase in comparison with last year, 3 new names having been added to the register, and 1 cancelled owing to the holder having retired from business. The total number to whom certificates of registration were issued was 28 as against 26 in the preceding period.

The various premises throughout the City were visited and it was apparent that due observance was being given to the terms of the Act, the infringements being few and comparatively trivial. In one or two instances, however, attention required to be directed to certain discrepancies in the writing up of the Poisons Book and a warning administered to those at fault.

THE FERTILISERS AND FEEDING STUFFS ACT, 1926.

Attention was directed in last year's report to the apathy displayed by the farmers throughout the district in failing to avail themselves of the facilities granted under the provisions of this Act. While the Act, in many respects, was framed in the agricultural interest, it seems somewhat unusual to find those whom it was primarily intended to benefit practically ignoring it altogether.

In pursuance of the powers invested in the Local Authority, visitation was made during the year to a number of premises in the City where fertilisers and feeding stuffs were manufactured or on sale and eight samples of various feeding stuffs were taken in the manner prescribed by the Regulations and forwarded to the Agricultural Analyst for examination.

The results were highly satisfactory as the composition of each was not only in conformity with the statutory statements but, in several instances, the percentages of oil and albumenoids were distinctly higher than those guaranteed by the manufacturers.

THE MERCHANDISE MARKS ACT, 1926.

In addition to the various imported foodstuffs which under this Act were required to bear an indication of the country of origin there came into operation, during the year, an Order in Council making this applicable to imported raw tomatoes and malt products.

In regard to the former commodity it was found on visiting a number of the shops throughout the City that there existed some dubiety as to the interpretation of Section 4 of the Order which reads :—" Nothing in this Order shall apply to sales of raw tomatoes in quantities of 14 lbs. or less." It was assumed by many persons that all sales of 14 lbs. or less were exempt from the terms of the Order and that ticketing was only required in connection with quantities above that amount, but the Department of Agriculture has decided that while this applies to tomatoes *on sale*, it does not affect the provision requiring marking *on exposure for sale*, however small the quantity exposed for sale may be.

Another difficulty arose in regard to the produce from the Channel Islands as to whether these tomatoes are to be recognised as home-grown or otherwise, and the opinion of the Department of Agriculture was requested. The reply was that they were to be regarded as foreign produce, as Section 13 (4) of the Act provides that goods manufactured or produced in any of the Channel Islands shall, for the purposes of the Act, be treated as if they were foreign produce *unless an Order in Council has been issued to the contrary*, and no such Order has come into operation.

It was evident from inspection of the various business premises that the majority of the shopkeepers were observant of the terms of the different Orders while those who had failed in this respect received a reprimand and subsequent visits proved that this procedure had been effective.

STAFF.

I desire to express my cordial appreciation of the hearty co-operation and the enthusiastic services rendered by Mr Thomas Bishop, Depute Chief Inspector, and all the members of the Staff.

I am,

My Lord Provost and Gentlemen,

Your obedient Servant,

ALLAN W. RITCHIE, F.R.San.I., F.R.S.E.
Chief Sanitary Inspector.

NATURE OF NUISANCE.																									
<div>Water-closets :— Water-closets introduced New apparatus substituted Improved or repaired Partitions of W.C. apartments repaired Water-closets and sinks in a filthy condition and cleansed Choked water-closets cleared Water-closet apartments insufficiently lighted and ventilated—improvements effected New water-closet apartments provided Sinks, Tubs and Wash-hand Basins :— Sinks introduced Insanitary sinks abolished Earthenware sinks and tubs substituted Repaired (Woodwork, etc.) Choked sinks, wash-tubs, etc., cleared Wash-hand basins renewed or introduced Sinks removed to more sanitary situation Drains :— Choked drains cleared Choked surface traps cleared Drains repaired or renewed Soil pipes repaired or renewed Sinks, etc., waste pipes repaired or renewed Rain-water conductors repaired or renewed Water Supply :— Cisterns found dirty Cisterns found without covers Cisterns repaired or renewed</div>	Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Collinton	Corstorphine and Craigmond	Totals	
	...	8	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	32	...	3	46
	9	1	2	8	6	8	1	2	2	7	4	3	14	5	17	...	7	2	29	3	1	2	1	141	
	11	86	5	2	...	2	4	1	6	13	7	39	4	18	33	35	2	24	4	5	...	...	3	304
	2	18	...	2	...	...	...	...	...	1	2	3	...	...	...	1	...	...	...	1	...	...	...	30
	2	150	3	...	...	2	...	3	5	2	5	15	1	4	44	11	...	10	6	2	...	...	...	265
	2	67	5	...	...	5	...	2	3	13	6	24	4	14	41	5	5	14	1	9	2	1	1	224
	4	...	...	...	...	...	...	...	...	...	2	1	...	1	...	...	...	9	...	...	...	...	...	17
	...	5	...	2	...	...	...	1	1	...	...	4	...	1	...	...	...	...	...	...	32	...	4	50
	1	17	10	7	1	1	1	...	1	1	...	3	1	1	8	3	55
	3	15	...	...	...	2	1	...	3	2	2	1	...	8	...	2	...	3	...	...	...	...	1	44
	17	15	...	...	5	9	1	1	3	1	2	5	30	8	15	1	1	3	9	...	...	...	1	127
	28	47	2	3	10	6	4	1	3	11	6	20	40	7	12	21	11	11	28	4	32	...	2	298	
	2	39	1	10	1	5	4	4	10	3	12	7	2	6	11	7	124
	1	...	1	2	4	1	9
	...	3	1	4
	27	73	10	4	12	108	6	10	10	9	25	10	27	32	30	125	31	38	39	9	12	5	3	4	649
	...	19	...	1	4	8	5	2	2	3	3	5	2	12	3	5	9	10	20	7	7	125
	2	7	...	1	...	1	...	2	2	2	2	...	1	2	2	...	3	1	2	...	1	2	...	1	32
	2	17	...	1	...	7	1	1	1	...	1	1	3	3	5	5	...	1	6	1	55
	6	17	6	3	1	7	2	2	8	4	3	12	12	13	2	6	15	2	4	2	127
	4	9	1	1	3	17	1	4	8	4	2	15	1	2	2	...	74
	2	1	1	...	1	3	...	1	1	10
4	...	...	...	...	...	...	...	...	...	1	...	1	1	1	...	...	2	...	...	...	...	...	...	10
1	...	...	...	...	...	...	...	...	1	...	2	2	1	2	8	2	9	9	3	9	...	...	...	49
129	614	45	30	42	192	34	27	49	95	69	166	169	140	327	151	102	102	232	47	91	74	16	28	2,869	
CARRY FORWARD																									

NUISANCES AND SANITARY IMPROVEMENTS IN 1930—continued.

NATURE OF NUISANCE.	Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Colinton	Corstorphine and Craigmond	Totals
BROUGHT FORWARD	129	614	45	30	42	192	34	27	49	95	69	166	169	140	327	151	102	232	47	91	74	16	28	2,869
<i>Water Supply (continued) :—</i>																								
Cisterns removed to a more sanitary situation	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Branches taken off the main . . . . .	...	...	2	...	...	...	...	...	...	4	...	...	...	...	...	...	...	7	...	...	...	...	...	13
Water pipes repaired	5	19	8	...	...	...	...	...	5	3	1	3	2	4	10	2	5	15	2	2	...	...	...	86
Houses temporarily without water supply due to burst pipes, etc. . . . .	...	77	...	...	1	...	...	...	...	...	1	...	7	...	67	...	...	3	...	...	...	...	...	156
<i>Repairs to Houses :—</i>																								
Partition walls repaired	5	14	...	2	...	...	1	2	...	4	3	3	...	3	2	1	1	10	1	...	...	...	1	53
Floors, hearths, doors, etc., repaired	8	22	1	2	3	2	4	4	12	12	5	12	7	15	17	12	5	44	5	6	2	...	2	202
Windows and skylights repaired or renewed	17	22	1	1	6	1	6	6	6	10	5	8	3	4	21	14	4	44	6	9	...	...	3	197
Coal bunkers repaired or provided	1	39	1	...	...	...	1	...	...	1	1	2	1	3	4	...	1	5	2	4	...	...	...	66
Grates or ranges repaired or substituted	4	10	1	1	...	1	...	1	4	2	6	12	1	5	4	4	2	8	3	4	...	...	3	77
Wall and ceiling plaster repaired	17	34	11	5	1	...	2	2	8	1	6	18	3	14	15	4	8	27	6	11	...	1	1	195
Defective roofs repaired	1	15	1	3	1	...	4	2	5	1	...	3	...	5	6	7	7	11	1	3	...	2	1	79
Boiler of kitchen range renewed . . . . .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
<i>Nuisances in Houses :—</i>																								
Floors and bedding of houses in a dirty condition and cleansed by tenants . . . . .	...	59	24	4	1	3	...	1	2	1	1	9	6	9	11	24	1	10	2	8	...	2	...	178
Nuisance due to bad smells in dwelling houses caused by escapes of gas, dead vermin, etc.	11	9	...	...	4	2	6	2	6	14	6	3	1	5	1	...	5	4	2	3	3	6	3	96
Smoke in houses due to foul or obstructed vents	11	15	3	4	1	1	...	3	5	6	6	17	...	4	8	6	4	14	4	4	3	1	3	123
Damp houses remedied or abated	1	1	2	...	...	...	1	1	12	1	...	1	4	3	...	1	8	6	...	14	...	...	1	57
Damp and uninhabitable houses vacated . . . . .	...	18	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	2	2	...	25
Houses overcrowded	82	104	24	3	6	40	11	22	33	39	49	211	62	124	186	33	64	136	59	67	3	1	1	1,360
Houses and shops flooded from defects on flats above	7	9	...	1	...	...	1	1	2	2	1	2	1	...	21	...	1	...	1	1	...	...	...	51
Animals kept in, or in close proximity to dwellings	3	4	1	1	...	1	2	3	4	3	4	1	1	4	...	3	...	1	1	1	1	...	2	41
CARRY FORWARD	303	1086	125	58	67	243	73	77	153	200	165	471	268	342	701	262	218	577	143	228	88	31	49	5,928

NATURE OF NUISANCE.		Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Colinton	Corstorphine and Craigmond	TOTALS
BROUGHT FORWARD		303	1086	125	58	67	243	73	77	153	200	165	471	268	342	701	262	218	577	143	228	88	31	49	5,928
Nuisances in Houses (continued):—																									
Houses distempered, papered or painted by—																									
Tenants		7	47	3	4	2	2	...	1	4	2	4	23	...	1	6	2	10	21	1	3	...	...	...	143
Owners		13	38	14	20	13	10	1	13	7	2	1	51	6	3	16	3	8	15	1	4	...	...	1	240
Stairs, Passages, etc.:—																									
Staircases painted		208	72	35	51	64	66	12	72	75	47	30	45	95	31	68	63	55	121	20	129	...	...	18	1,377
Stairs and passages in a dirty condition and cleansed by tenants		171	297	169	37	27	113	27	25	99	40	67	295	71	92	218	113	56	67	22	46	...	2	5	2,059
Dogs and cats committing nuisance in common stairs and back-greens		9	23	3	7	8	12	8	7	13	11	8	8	11	8	9	3	1	7	3	7	...	...	...	166
Shops:—																									
Shops cleaned by tenants or owners		...	7	...	2	2	...	1	...	7	...	1	...	4	10	3	1	1	2	...	...	...	...	...	41
General:—																									
Premises infested by rats		11	36	10	6	8	12	19	18	33	12	6	12	5	11	8	17	8	11	14	13	8	7	12	297
Premises infested by other vermin		5	8	14	3	3	3	3	7	11	...	7	19	3	10	3	5	11	27	4	25	7	2	2	182
Accumulations of rubbish, garbage, and filth removed from areas, roofs, cellars and vacant houses		37	36	14	36	13	17	17	17	62	44	19	70	80	83	167	23	896	1133	259	732	3	1	5	3,764
Accumulation of manure near dwellings		...	11	...	2	...	6	2	2	11	11	1	15	...	...	5	12	...	2	1	2	1	...	3	87
Disused cellars cleaned and closed		2	9	...	...	...	1	...	9	14	3	...	11	1	...	69	...	1	7	...	1	...	...	...	128
Tenants casting garbage over windows		14	66	1	5	12	3	12	3	24	9	10	38	9	13	9	10	3	...	1	3	...	...	...	245
Seasonal workers huts found dirty and cleansed		...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	4	2	1	...	...	...	...	5	14
Surfacing of courts repaired or renewed		1	...	...	...	...	...	...	...	...	...	1	...	4	1	...	2	...	1	...	...	...	...	...	10
Miscellaneous nuisances		17	28	6	5	6	4	7	4	11	10	14	23	10	14	9	40	13	19	10	27	14	2	14	307
TOTALS		798	1764	394	238	225	492	182	255	524	391	334	1081	567	619	1291	560	1283	2011	479	1220	121	45	114	14,988

S U M M A R Y.

Number of complaints by citizens	3,041
„ „ „ other Departments	62
Number of nuisances discovered and reported by District Inspectors . .	11,885
<hr/>	
Total number of nuisances dealt with by the Department	14,988
Number of intimations of existence of nuisance served	1,386
„ notices to remove nuisances served at the instance of the Local Authority	62
„ notices delivered cautioning persons against casting garbage over windows	1,905
„ notices served on occupiers failing to take due rotation of stair sweeping and washing	714
„ notices served for the cleaning of dirty areas, cellars, etc. .	277
„ notices and letters served for the whitewashing and cleansing of houses	89
„ notices and letters served for the removal of accumulation of manure	118
„ notices served in connection with defective drains and soil pipes	177

VETERINARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, 30th April 1931.

To
*The Lord Provost, Magistrates, and
Council of the City of Edinburgh.*

MY LORD, LADIES AND GENTLEMEN,

I beg to submit, for transmission to the Department of Health for Scotland, my Report for the year ending 31st December 1930, which has been called for by the Department in virtue of their powers under Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914.

I am,

Your obedient Servant,

A. GOFTON,
Chief Veterinary Inspector.

To
*The Secretary,
Department of Health for Scotland,
Edinburgh.*

GENTLEMEN,

I beg to submit herewith my Report for the year 1930, as required by Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914, and the Department's Circular Letter of 12th February 1931. An account of the year's work in connection with the inspection of meat and other foodstuffs, including port food inspection, is added.

MILK AND DAIRIES (SCOTLAND) ACT, 1914.

No administrative difficulties have been encountered during the year in the operation of the Act, and no points have arisen which merit special mention.

(a) **Inspection of Cows and Dairy Byres.**—In terms of the Act the Veterinary Inspector is required to inspect the cattle in all registered dairies in the City from time to time and once at least in each year. In accordance with practice, the cattle in all the registered dairies in the City have been examined at intervals of one month. During the year 920 visits were made to registered dairies and the cattle therein inspected. In determining the duties of the Veterinary Inspector, under the Act, the Local Authority made provision for the periodical inspection of all dairy cattle in premises which were exempt from registration under the Act. In accordance with this requirement, 77 visits were made to non-registered dairies.

The newly-calved cows offered for sale in the market at Gorgie on the Tuesday and Wednesday of each week were subjected to inspection and examination in the market identical to that which takes place in registered dairy premises. During the year 2,535 cows were so examined in the market, representing an average of 49 cows exposed for sale each week. Five cows affected with tuberculous emaciation, and one having a chronic cough and showing definite clinical symptoms of tuberculosis were ordered to be removed from the markets in terms of Article 12 of the Tuberculosis Order of 1925. All of these animals were slaughtered by the owners at their own risk. Fourteen cows suffering from other diseased conditions were discovered in the markets and were withdrawn from sale. The total number of animals thus dealt with in the markets was twenty.

(b) **Health of Cows, etc.**—Apart from tuberculosis, 134 diseased cows were detected in the course of inspections of cattle in registered or exempt premises. The diseases encountered were as follows :—

Suppurating conditions of udders and teats	28
Psoroptic mange and ringworm	13
Johne's disease and emaciation	2
Mastitis	69
Retained placenta	4
General disorders	18

The cows in question were removed permanently or temporarily from the milking herds as cases required. The milk was withdrawn from sale in all cases in which risk was entailed of contamination or infection from the diseased condition. In appropriate cases it was fed to pigs or calves after boiling, otherwise it was destroyed.

(c) **Tuberculosis in Dairy Cows.**—During the year 15 cows, on registered dairy premises in the City, which were found to be tuberculous, within the meaning of the Tuberculosis Order of 1925, were dealt with in terms of that Order. Of these, 8 were affected with tuberculosis of the udder and the balance were affected with tuberculous emaciation or chronic cough and were showing definite clinical signs of tuberculosis. One of the cows found to be affected with tuberculosis of the udder had been newly purchased. It was returned to the seller where it was dealt with by the Local Authority concerned which became responsible for the payment of compensation.

In addition to the above, 12 cows, which were shown to be affected with tuberculosis, but which did not come within the scope of the Tuberculosis Order, were removed from the herds and sold for slaughter by the owners concerned. The total number of milk cows removed from registered herds and Gorgie Markets during the year on account of tuberculosis was thus 33.

The tuberculin test was not applied in any case under the powers contained in Section 22 of the Act. So far as that test was employed for the diagnosis of tuberculosis it was used under the powers contained in the Tuberculosis Order.

The incidence of tuberculosis in dairy cows in the City and district revealed by post-mortem statistics at the abattoirs shows no material change as compared with former years. During the year 1,509 cows or 40·55 per cent. of the total number slaughtered in the City abattoirs were affected with tuberculosis in some degree. In 11·33 per cent. of these, the whole of the carcass and all the offal were condemned. The corresponding figure for the preceding year was 10·71 per cent. In 21·14 per cent. of the tuberculous cows the disease was moderately extensive in its distribution and in 67·53 per cent. it was limited in extent and more or less localised.

(d) **Repairs, Improvements, etc., in Cowsheds.**—In addition to the minor repairs necessary for general maintenance, three dairy premises were subjected, during the year, to general reconditioning and the introduction of improved lighting and ventilation.

(e) **General Sanitary Conditions Found.**—Generally speaking, the dairy premises have been maintained in good sanitary condition. From time to time the necessary action has been taken to ensure the maintenance of cleanliness of dairy stock and premises, and to prevent the use of pitcher houses for domestic washing, and other similar breaches of the dairy bye-laws.

(f) **Number of Cowsheds.**—At December 1930 there were on the register 84 premises in the occupation of milk producers. The number of cowsheds on these premises was 147 with a stall accommodation for 3,133 cows.

Twelve certificates of registration were cancelled during the year and, of these, four were revived on the application of a new tenant. Four new certificates were granted and three were transferred to another name. There was thus a net decrease in the City of four dairy premises in the occupation of milk producers.

At December 1930 the number of exempted premises was 27 and the number of cows therein 67. These premises are all licensed under the Cattle-sheds in Burghs (Scotland) Act, 1866. In only a few cases is milk sold from these premises. Exemption from registration under the Milk and Dairies (Scotland) Act, continued to be granted in those cases in which the amount of milk sold per day did not exceed two gallons.

(g) **Milk and Dairies Order, 1925.**—Articles 5 to 16 of the Milk and Dairies Order, 1925, have been complied with so far as these articles apply to the premises of milk producers in the City.

Tuberculous Infection of Milk.—With the object of obtaining a clear indication of the extent of the tuberculous infection of milk, as sold to the public in Scotland, the Department of Health for Scotland submitted to the Corporation, during the year, a scheme for an extended investigation, by uniform methods, in the large centres of population in Scotland, and invited the Corporation to take part in the investigation, towards the cost of which a grant would be made by the Department. The Corporation agreed to act, and the work is being carried out jointly in this Department and in the Bacteriological Department of the University under Professor Mackie. The work was commenced in October and the effect is seen in the large increase in the number of samples of milk subjected to the biological test, as shown elsewhere, from an average of 100 in a normal year to 350 in the year under report. This total includes samples taken in the ordinary course in the earlier part of the year and those which have been subjected to test in the University. The results of the tests which were completed during the year are shown in Mr Jowett's report.

Milk and Dairies (Scotland) Act, 1914 (Sections 13, 14 and 21).—The City dairymen continue to observe the terms of Sections 13 and 14 of the Act with regard to the withdrawal from sale of the milk from a diseased cow and notification of the existence of disease.

The City being entirely a receiving and consuming district no question of taking samples of milk under Section 21 of the Act has arisen.

Milk (Special Designations) Order (Scotland), 1930.—The producer's licence granted in 1928 for the sale of Grade "A" milk has been continued. The conditions of the licence have been complied with and the required hygienic standard of the milk has been maintained.

The conditions of the licence for the sale of "Certified" milk, held by the Royal Victoria Hospital Tuberculosis Trust, Gracemount Farm, Liberton, Edinburgh, have also been complied with during the year. The average number of cows in the herd is 40 and production has been maintained at approximately 25,500 gallons, which is wholly retailed in the City by the producer.

The herd was twice tested with tuberculin, in the spring and in the autumn, by the double intradermal method. The number of animals tested at the two tests was 87. There were no reactors. The young stock, comprising 44 animals, were tested in the autumn on the grazing farm belonging to the Trust, at Romanno Bridge, Peebles-shire. There were no reactors.

All milks sold in the City under licences granted in terms of the Milk (Special Designations) Order, have been periodically sampled and subjected to bacteriological examination. During the year, ninety-six samples of graded milk were thus examined.

Of these, twenty were samples of "pasteurised" milk, and were representative of milk from both licensed and non-licensed pasteurisers. Further reference is made by Mr Jowett to these examinations in his report on the bacteriological work performed.

Milk Supply—City Hospitals.—The dairy herd at Colinton Mains Farm belonging to the Corporation, has continued the supply of the milk to the hospitals. The herd was subjected to the double-intradermal tuberculin test twice during the year and tubercle-free condition has been maintained. The milk was repeatedly sampled during the year for bacteriological examination and conformed to the bacterial standard for certified milk.

The average number of cows in milk during the year was 81 and the total output of milk for the year amounted to 72,000 gallons. Official milk recording was continued and the 48 cows and heifers whose record was completed during the year showed an average milk production of 911 gallons at 3·88 per cent. butter fat in an average period of 34 weeks. Of these 48 animals, 13 gave a production exceeding 1,000 gallons, the maximum production being obtained from a heifer which gave 1,420 gallons at 3·85 per cent. butter fat in 37 weeks.

BACTERIOLOGICAL LABORATORY.

Summary, by Mr W. Jowett, F.R.C.V.S., D.V.H., of work performed in the Laboratory during 1930.

A.—BACTERIOLOGICAL EXAMINATION OF MILK.

Enumeration of Bacteria.—During the past year samples of milk have again been submitted to bacteriological examination for the purpose of ascertaining their respective hygienic standards, and there is no doubt that such tests serve as a useful index as to the amount of care and cleanliness which have been exercised in the production and handling of this food material.

The following is a summary of the various classes or grades of milk samples which have been submitted to bacteriological analysis during 1930 :—

Certified Milk	41
Grade "A" Milk (Tuberculin Tested)	26
Grade "A" Milk	9
Pasteurised Milk	20
Ordinary Market Milk	2
Milk for City Hospitals	5
	<hr/>
	103
	<hr/>

Of the above milk samples, seven of the Certified and eight of the Grade "A" samples failed to conform to the required standard. Such lapses were, however, only temporary, subsequent graded milk samples proving, as a rule, when tested, quite satisfactory and up to standard.

Of the Pasteurised milk samples tested, four failed to conform to the required standard in so far as concerns the general enumeration of living bacteria present, but, when the additional "Presumptive coli test" was applied to the pasteurised milk samples—and this test is applied as a routine test to all milk samples in this laboratory—it was found that living coliform organisms were present in at least twelve of the pasteurised milk samples in the quantities tested, namely, one-tenth of a cubic centimetre—this being a high percentage.

According to one authority on the subject an effectively pasteurised milk should not contain lactose fermenting bacilli in one cubic centimetre of any sample tested.

Many of the above mentioned samples contained these undesirable organisms even in one-tenth of a cubic centimetre, so, obviously, they could not be classed as "effectively pasteurised" according to this standard. One is, of course, aware that a standard in regard to the content in coliform organisms is not laid down, officially, in respect of pasteurised milk. This, in the writer's opinion, is decidedly an unfortunate omission, since there is no doubt that the "Presumptive Coli test" furnishes a good and useful indication as to the efficiency of a pasteurising process. Whilst it is true that a certain small percentage of strains of the *Bacillus coli* are able to withstand the *minimum* temperature employed in commercial pasteurisation (145°F.), this percentage is reduced to negligible proportions when the temperature is raised to 150°F., in fact less than half of one per cent. (0.5 per cent.) of strains of the *Bacillus coli* are able to withstand heating to the higher temperature for a period of thirty minutes.

From the results furnished by the examination of locally pasteurised milk samples during the past, and immediately preceding years, the inference is drawn that some of these samples had been underheated; they had been subjected to the bare minimum temperature, or possibly even to a still lower temperature, or for a period less than the requisite thirty minutes. It is noteworthy that all the samples showed a good "cream line," a fact which tends to support the inference that they had probably been underheated.

It is, of course, the case that heating milk to a temperature over 145°F. may reduce the "cream line" (*i.e.*—the visible layer of cream on the surface of the milk—easily apparent when the fluid is inspected in a glass container), and this is an occurrence almost certainly to be expected in samples which have been heated to a temperature of 150°F. for thirty minutes. The cream is, as a matter of fact, still present in the milk, but it is then less clearly shown as a layer on the surface; furthermore, the taste and flavour of the milk remain practically unaltered after heating to this temperature, provided that oxidation be prevented during the process. It may be mentioned, however, in this connection, that according to certain authorities, any heat treatment of milk—such, for example, as that utilised in the process of pasteurisation—is liable to cause variation in many of its constituents, some of these variations being of importance to nutrition; so, obviously, it would appear advisable to avoid heating the fluid at all whenever a satisfactory supply of milk can be obtained otherwise.

Apparently, the purchaser or consumer has become accustomed to place a very considerable amount of reliance on the visible amount of cream present (*i.e.*—the cream line), as an indication of the quality of milk, and doubtless this constitutes a temptation to those concerned in the commercial pasteurisation of milk to underheat the fluid rather than to allow a margin of safety and to subject it to the before-mentioned safer temperature of 150°F. for thirty minutes. The sole object of pasteurisation is to destroy or render inert, objectionable, or deleterious organisms, as well as those actually harmful or dangerous to health, which may be present in the milk. It follows, therefore, that when necessary to subject milk to heat treatment for the purpose named, due attention should be directed to ensure that the process is conducted in a thorough manner rather than that risks be taken in regard to the efficacy of the process merely in order to preserve the cream line.

The regulations concerning pasteurised milk (as officially designated) enjoin that after having been heated to the required temperature and for the stipulated period of time, the milk must be immediately cooled to a temperature of not more than 55°F. This, presumably, is accomplished by most pasteurisers, but it is questionable if the pasteurised milk is always maintained at or below that temperature subsequently, until consumed, certainly this is hardly likely to be the case during the warmer summer months, and at temperatures above that indicated (55°F.) any coliform organisms present in the milk will find that fluid a very favourable medium for their growth and multiplication.

B.—BACTERIOLOGICAL EXAMINATION OF MILK for the presence of Tubercle Bacilli and other Specific Organisms.

(1). Milk from Individual Cows (in City byres).

Number Examined.	Object.	Nature of Examination.	Result.
105	Detection of Tubercle Bacilli.	Microscopical	Positive . . . 7 Negative . . . 98

Of the 98 milk samples above shown as microscopically negative to tuberculosis, streptococci were detected on microscopical examination alone in 13. Of the remainder 12 were subsequently submitted to the biological test and 47 to cultural tests, with the following results —

Number Examined.	Object.	Nature of Examination.	Result.
12	To determine the presence of Tubercle Bacilli	Biological	Positive . . . 1 Negative . . . 11
47	To determine the presence of other Specific Organisms	Cultural	Streptococci . . . 28 Staphylococci . . . 5 Mixed infection . . . 6 C. pyogenes . . . 3 Coli Type bacillus . . . 5

(2). Mixed or Bulk Milk Samples, collected at Railway Stations, Milk Depots, or Retailers' Premises in Edinburgh.

The following Table shows the numbers of bulk milk samples which were subjected to biological test for tuberculosis and in which the test was completed during the year :—

Brought forward (incomplete at end of 1929) :—				
Farm Milk	Negative	21		
	Inconclusive	1		
		—	22	
Number tested and test completed at 31st December 1930 :—				
Farm Milk	Positive	7		
	Negative	119		
	Inconclusive	9		
		—	135	
Retailed Milk	Positive	2		
	Negative	28		
	Inconclusive	1		
		—	31	
Pasteurised Milk	Negative	29		
		—	29	
	Total completed		217	
Remaining under test and incomplete at 31st December 1930 :—				
Farm Milk		46		
Retailed Milk		43		
Pasteurised Milk		44		
		—	133	
	Total		350	

The 7 positive farm samples were delivered in the City from farms in the districts of other local authorities. Investigation resulted in the detection of 6 cows affected with tuberculosis of the udder on five of the farms. These animals were destroyed by the local authorities concerned. On the remaining two farms, clinical examination failed to detect a cow likely to be eliminating tubercle bacilli in the milk. Group samples were taken from the cows and subjected to the biological test. All of these proved negative, showing that the milk had ceased to be infective. The only conclusion which could be drawn was that the cow or cows responsible for the infection had been removed from the herds concerned between the time the original sample was taken and the clinical examination after the completion of the biological test, about five weeks later.

When the two positive samples obtained in retailers' shops were followed up, a cow affected with tuberculosis of the udder was found on the premises of one of the producers concerned. In the second case, group sampling was resorted to on the farm, but all the samples proved negative to the biological test.

C.—BACTERIOLOGICAL EXAMINATION OF OTHER MATERIALS FOR DIAGNOSIS.

Material.	Number Examined.	Nature of Examination.	Result.
Blood preparations	210	Microscopical and cultural (one or both)	<i>Anthrax</i> — Positive 1 Negative 209
Do.	18	Sero-Agglutination	<i>B. Abortus</i> infection— Positive 7 Doubtful 1 Pyogenic infections 10
Skin scrapings	7	Microscopical	<i>Mange</i> — (Scheduled Forms) Positive 0 Negative 7
Expectorate (cow's)	18	Microscopical	<i>Tuberculosis</i> — Positive 13 Negative 5
Diseased organs and materials	42	Microscopical, and, in certain instances, Cultural and Biological in addition	Tuberculosis 11 <i>B. Abortus</i> infection 3 <i>C. pyogenes</i> infection 4 Other pyogenic infections 10 <i>B. Necrosis</i> infection 2 <i>Streptothrix actinomyces</i> 1 <i>Actinobacillosis</i> 3 Neoplasms 4 Johne's Disease 2 Undetermined 2
Other materials	5	Cultural and Biological	Suspected "Food poisoning" 1 Defective or suspicious (adulterated) food materials 4
Milk bottles	4	Cultural	Tests for sterility 4
Hide bindings from orange boxes	4	Cultural	<i>Anthrax</i> — Positive 0 Negative 4

The foregoing tables are self explanatory. There are, however, one or two items of special interest. Firstly, the percentage of bulk milk samples, sampled on their arrival at the railway stations, wholesaler's depots, or retailer's premises in Edinburgh, which, on being submitted to the biological test, were definitely proved to contain tubercle bacilli. Reference to the Table on page 144 will show that these samples are divided for the purpose of classification into (1) Raw or Farm Milk samples, *i.e.*—those direct from the farms or producers; (2) Retailed Milk samples—obtained from the bulk supplies of milk in shops or dairies, as offered for sale; and (3) Pasteurised Milk samples.

Excluding samples which yielded inconclusive results, it may be observed that, of the first mentioned, the farm milk samples, examined during the year, approximately only 4·7 per cent. were definitely proved to contain tubercle bacilli, whereas, in the retailers' samples—samples procured from the bulk supplies in the milk shops and dairies—the percentage was higher, namely 6·6 per cent. The apparent discrepancy in the two figures is explained partly by the fact that more farm samples were submitted to examination than shop samples—147 of the former as compared with only 30 of the latter. Probably if an equal number of samples from each source had been examined, the number of positives would have approximated more closely to each other. But, apart from this, it is obvious that milk offered for sale in a retailer's premises is likely to contain supplies from more than one source of origin and consequently stands a greater chance of including an infected supply ; again, a tubercle infected raw milk might be distributed to two or more retailers' premises, and, as a result, samples taken from each of the shops so supplied would show a positive result on sampling.

In addition to the above-detailed investigations and examinations, vaccines (autogenous and stock) were prepared in the laboratory during the past year and were utilised in the treatment of cases of bovine mastitis in the farm stock, and certain other diseases.

With reference to the items included under the heading of “Diseased Organs and Materials examined” special attention has again been directed to the examination of certain of the pyogenic infections encountered in sheep slaughtered in the local abattoir at Gorgie, especially concerning the incidence, nature and causes of the respective lesions encountered. As mentioned in a previous report, the disease Caseous lymphadenitis—prevalent in certain meat exporting countries and met with occasionally in imported mutton carcasses—has not, so far, been encountered in any of the locally slaughtered sheep. Certain forms of pyogenic infection occur, which certainly bear a somewhat close resemblance to the above named disease and it was deemed advisable to make an extended study of these as opportunity offered, since their identification and differentiation from the disease mentioned is of undoubted importance in the judgment as to whether carcasses, or portions of carcasses, of infected animals are suitable, or otherwise, for food purposes.

W. JOWETT, F.R.C.V.S., D.V.H.

INSPECTION OF MEAT AND OTHER FOODS.

(a) **Fat Stock Markets.**—The usual observation has been maintained in the fat stock markets throughout the year, a Veterinary Officer being detailed for duty in the markets on each market day. Observation is maintained for the detection of sick and injured animals and for the prevention of cruelty. Under the Transit of Animals Order, power is conferred on a Veterinary Inspector of the Local Authority to prohibit the transport by road or rail of an animal which, in his opinion, cannot be conveyed without unnecessary suffering, and this power is exercised whenever occasion arises. The close supervision which has been maintained in the Markets and at the Railway Loading Banks has had the effect of reducing the numbers of unfit animals consigned for sale to the fat stock markets and offered for transport by rail. Proceedings were taken against a dealer for breach of the Transit of Animals Order, in respect of a cow which he caused to be conveyed by rail to the City when she was in a condition in which travelling by rail involved unnecessary suffering. A plea of guilty was tendered and a penalty of £5 imposed.

The following Table shows the number of animals exposed for sale in the fat stock markets during 1930 :—

Cattle	.	.	.	.	.	.	.	47,935
Calves	.	.	.	.	.	.	.	5,617
Sheep	.	.	.	.	.	.	.	233,482
Swine	.	.	.	.	.	.	.	20,240
								307,274

(b) **Abattoirs.**—Supervision has been maintained in accordance with the usual practice at Gorgie and Leith Abattoirs.

The number of animals passing through the slaughterhouses during 1930 is shown in the following Table :—

		Gorgie.	Leith.	Total.
Cattle	Oxen	25,880	2,526	28,406
	Bulls	552	61	613
	Cows	2,926	795	3,721
	Heifers	777	14	791
		30,135	3,396	33,531
Calves		4,384	37	4,421
Sheep		128,984	8,789	137,773
Swine		13,090	1,168	14,258
		176,593	13,390	189,983

(c) **Carcases and offal condemned in Abattoirs.**—Carcases partially or wholly condemned in the City abattoirs weighed approximately 130·95 tons. To this there falls to be added 55·79 tons (weight estimated) of condemned offal, making a total of approximately 186·74 tons an increase of 3·51 tons as compared with the preceding year. Tuberculosis was responsible for 49·19 per cent. of the carcase seizures and for 34·02 per cent. of the offal seized. Details of the seizures are shown in the following Tables :—

Number and weight of carcases in the different classes of animals condemned at abattoirs during 1930.

	Totally condemned.		Partially condemned.		Total Weight in lb.
	No.	Weight in lb.	No.	Weight in lb.	
Oxen	89	50,712	242	29,333	80,045
Bulls	3	2,166	45	6,156	8,322
Cows	227	115,255	346	51,040	166,295
Heifers	5	2,469	18	2,549	5,018
Calves	45	2,310	20	752	3,062
Sheep	340	13,805	192	3,308	17,113
Swine	88	10,978	58	2,478	13,456
Total	797	197,695	921	95,616	293,311

Number of carcases condemned in the different classes of animals slaughtered in abattoirs during 1930, and causes of condemnation.

	CATTLE.										Sheep.		Swine.		TOTALS.
	Oxen.		Bulls.		Cows.		Heifers.		Calves.						
	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	
Tuberculosis	57	169	2	31	171	319	3	17	3	12	...	...	28	32	844
Edema and Emacia- tion	6	...	...	...	10	...	...	...	5	...	161	67	8	...	257
Traumatism . . . . .	...	2	...	4	...	8	...	...	1	1	7	27	...	12	62
Septic conditions	3	14	...	3	5	5	...	...	3	...	7	24	3	4	71
Pericarditis	2	...	1	...	4	...	...	...	...	...	...	...	...	...	7
Peritonitis	5	13	...	2	1	8	...	...	3	...	8	7	5	4	56
Pleurisy and Pneu- monia	2	11	...	1	1	4	...	...	5	6	21	60	6	4	121
Dead, Moribund and Illbled	9	...	...	...	13	...	2	...	17	...	127	...	12	...	180
Jaundice . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
Neoplasms	1	1	...	...	...	1	...	...	1	...	4	7	...	1	16
Actinomycosis and Actinobacillosis	3	30	...	3	...	...	...	1	...	...	...	...	...	...	37
Melanosis	1	2	...	1	...	...	...	...	1	1	...	...	...	...	6
Swine Erysipelas . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	11	...	11
Swine Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	13	...	13
Mastitis . . . . .	...	...	...	...	16	1	...	...	...	...	5	...	...	1	23
Immaturity . . . . .	...	...	...	...	...	...	...	...	6	...	...	...	...	...	6
Metritis . . . . .	...	...	...	...	6	...	...	...	...	...	...	...	...	...	6
	89	242	3	45	227	346	5	18	45	20	340	192	88	58	1,718

Comparison between tuberculous and non-tuberculous diseases as causes of condemnation in carcasses of animals slaughtered in abattoirs during 1930.

		CATTLE.						Sheep.	Swine.	TOTAL.
		Oxen.	Bulls.	Cows.	Heifers.	Calves.	TOTAL.			
Tuberculosis .	{ Total .	57	2	171	3	3	236	...	28	264
	{ Partial.	169	31	319	17	12	548	...	32	580
Total and Partial .		226	33	490	20	15	784	...	60	844
Non-Tuberculous Diseases .	{ Total .	32	1	56	2	42	133	340	60	533
	{ Partial.	73	14	27	1	8	123	192	26	341
Total and Partial .		105	15	83	3	50	256	532	86	874

Number of organs condemned in the different classes of animals at abattoirs during 1930 (excluding organs of animals totally condemned).

		CATTLE.						Swine.	Sheep.	TOTAL.
		Oxen.	Bulls.	Cows.	Heifers.	Calves.	TOTAL.			
LUNGS :—										
Tuberculosis .		725	126	1,299	39	36	2,225	163	...	2,388
Other Causes .		449	13	94	2	8	566	100	136	802
HEARTS :—										
Tuberculosis .		...	...	...	...	...	...	...	...	...
Other Causes .		5	...	6	...	...	11	...	1	12
BOWELS :—										
Tuberculosis .		369	41	476	13	1	900	63	...	963
Other Causes .		28	2	21	1	...	52	...	...	52
STOMACHS :—										
Tuberculosis .		39	3	54	4	...	100	9	...	109
Other Causes .		124	9	39	1	2	175	1	1	177
SPLEENS :—										
Tuberculosis .		33	2	46	3	...	84	17	...	101
Other Causes .		9	2	5	...	...	16	...	...	16
LIVERS :—										
Tuberculosis .		309	29	202	13	16	569	134	...	703
Other Causes .		8,914	223	1,135	71	8	10,351	65	508	10,924
KIDNEYS :—										
Tuberculosis .		53	5	74	5	...	137	...	...	137
Other Causes .		24	1	40	...	...	65	3	1	69
UDDERS :—										
Tuberculosis .		...	...	15	1	...	16	...	...	16
Other Causes .		...	...	135	...	...	135	1	...	136
HEADS AND FEET :—										
Tuberculosis .		709	88	462	34	4	1,297	640	...	1,937
Other Causes .		120	10	5	...	1	136	1	...	137
Total .		11,910	554	4,108	187	76	16,835	1,197	647	18,679

Percentage incidence of Tuberculosis in animals slaughtered at Abattoirs during 1930.

Cattle	{ Oxen	4·32	Per cent.
	{ Bulls	27·73	
	{ Cows	40·55	
	{ Heifers	8·34	
Calves		0·93	
Swine		4·80	

(d) (1). **Wholesale Dead Meat Markets.**—During the year meat (fresh and frozen) estimated to be equivalent to 41,160 carcasses was imported into the City for sale in the wholesale dead meat markets. In addition, considerable quantities of frozen boneless meat, kidneys, livers, tripe, etc., were received. It is not possible to ascertain with any approach to accuracy the amount of this class of material which arrives in the City. Daily visits of inspection were made to the dead meat markets and to the premises of wholesale meat traders.

Attention was officially directed two years ago to the importation of frozen carcasses of mutton which were affected with caseous lymphadenitis or from which the lymphatic glands, which are the most common sites of the disease, had been removed. This disease appears to be exceedingly common in the sheep stocks of certain sheep-rearing countries in the southern hemisphere. Observations made by the Chief Veterinary Officer for the City of London about two years ago, and covering approximately 100,000 imported mutton carcasses, showed infection ranging from 0·09 per cent. in New Zealand sheep to a maximum of 12·3 per cent. in sheep originating in certain other countries. To meet trade requirements, imported mutton carcasses are regularly released at the port of entry subject to inspection at the place of destination and the receiving local authorities are advised accordingly. Such consignments are regularly received in the City and they are subjected to detailed examination as they are removed from cold store and defrosted. It is observed that the necessary examinations for the detection of the disease has, in most cases, been made presumably in the country of origin. Consignments arriving in the City have been free from evidence of disease.

Observations have continued to be made on lesions, in locally slaughtered sheep, which simulate, in any degree, the lesions of caseous lymphadenitis. In no case has this disease been encountered, but Mr Jowett has demonstrated the occurrence of certain conditions not previously described as occurring in British sheep.

On the instructions of the Public Health Committee, a company which regularly consigns considerable quantities of fresh meat to the City was prosecuted in respect of the consignment of the carcass of a sow which was badly affected with tuberculosis. The case was defended but the defence failed and a penalty of £50 was imposed. The company asked for a case to be stated for appeal. This was done but the appeal was not proceeded with.

(2). **Retail Shops, Street Hawkers, etc.**—Periodical visits were made during the year to shops, etc., in which foodstuffs are prepared or exposed for sale.

Number of visits paid to Shops, etc., during 1930.

Butchers' Shops	.	.	.	.	.	.	.	661
Provision Shops	.	.	.	.	.	.	.	750
Fishmongers' Shops	.	.	.	.	.	.	.	225
Fruiterers' Shops	.	.	.	.	.	.	.	351
Meat Sales and Wholesale Meat Shops	.	.	.	.	.	.	.	2,102
Live Stock Sales and Markets	.	.	.	.	.	.	.	260
Street Hawkers	.	.	.	.	.	.	.	23
Hide and Skin Merchants	.	.	.	.	.	.	.	753
Fish Markets	.	.	.	.	.	.	.	311
Restaurants	.	.	.	.	.	.	.	99
Railway Stations	.	.	.	.	.	.	.	6
Total								<u>5,541</u>

Inspectors are instructed to observe and to report on the sanitary conditions of food premises during the course of the visits of inspection. In a number of cases it was found that small shops had been opened in rooms which were used as sleeping apartments, the house window being used for the display of goods and the rest of the apartment being screened off with a curtain. These conditions were remedied as the

result of the action taken. Similarly, pressure had to be exercised on certain shopkeepers to carry out cleansing of cellars and other parts of their premises, and to remove accumulations of waste and other offensive materials.

The Sale of Food Order requires butchers and others offering imported meat for sale to attach a label or notice to the meat, bearing the word "Imported" in such a way as to be readily observed by a purchaser. Observation is maintained to see that this requirement is carried out. It continues to be necessary to warn individuals from time to time against negligence to observe the requirements of the Order, but, in no case, during the past year, was it necessary to proceed to further action.

Numbers and weights of foodstuffs seized in markets, shops, and other premises in the City, during 1930.

	No.	Weight in lbs.
Beef	48	6,926
Mutton	91	4,805 $\frac{3}{4}$
Pork	36	1,681 $\frac{1}{2}$
Veal	20	1,006
Poultry and Game	12	320
Edible Offal	11	3,384
Fruit and Vegetables	4	23,033 $\frac{1}{2}$
Provisions	4	162
Fish	11	16,707
Total	<u>237</u>	<u>58,025$\frac{3}{4}$</u>

(3). **Carcases, etc., submitted for inspection** in terms of Article 8 (4) of the Public Health (Meat) Regulations (Scotland), 1930. This regulation places an obligation on the consignee of a carcase which he has reason to believe has not been inspected in the manner specified by the Public Health (Meat) Regulations, to report its receipt to the Local Authority of the district. In practice, the wholesale meat traders of the City notify the Veterinary Department in all cases in which they receive home-killed carcases from beyond the City boundaries. During the year notification was received in respect of 1,620 carcases and 103 parts of carcases. After inspection of these, 91 carcases, 9 parts of carcases and 2 heads were seized and destroyed.

(4). **Approval of Meat Storage.**—Article 13 of the Public Health (Meat) Regulations (Scotland), 1930, requires persons selling meat from vans, carts, etc., who do not also keep an open shop for the sale of meat, to obtain from the Local Authority a certificate of approval of the accommodation provided for the storage of meat overnight. In the City only three traders fall into this category. The storage accommodation provided is in each case very satisfactory and the necessary certificates of approval have been granted by the Local Authority.

(5). **New Meat Regulations.**—The Public Health (Meat) Regulations (Scotland), 1924, were revoked and superseded by new Regulations during the year. No material change was made in the new Regulations.

PORT FOOD INSPECTION.

The usual supervision has been maintained as to the condition and soundness of foodstuffs landed at the Port of Leith during 1930. No feature of outstanding interest has arisen.

The Public Health (Oversea Meat) Regulations (Scotland), 1925, and the Public Health (Unsound Food) Regulations (Scotland), 1925, were revoked by the Department of Health during the year, and new Regulations were issued under the title Public Health (Imported Food) Regulations (Scotland), 1930. The Oversea Meat and Unsound Food Regulations were both concerned with the inspection of food brought from overseas and both have been incorporated into the new Regulations, practically without modification.

The appended summary will serve to show the origin and the kinds of foodstuffs falling under the supervision of the Department at the Port of Leith.

Imported Foodstuffs inspected, under the Public Health (Imported Food) Regulations (Scotland), 1930, during 1930.

Country of Origin.	Foodstuffs.	No. of Consignments.
Holland	Bacon	204
	Canned Meat	37
	Fruit	305
	Gut	1
	Hams	1
	Oysters	8
	Pigs' Feet	40
	Pigs' Tongues	1
	Provisions	1,157
	Vegetables	801
	Yeast	102
Denmark		<hr/>
	Bacon	104
	Canned Meats	60
	Fish	6
	Fruit	8
	Hams	32
	Lard	49
	Pigs' Feet	68
	Pigs' Heads	97
	Pigs' Stomachs	1
	Pork	2
	Provisions	410
	Sausages	9
	Vegetables	22
	Yeast	51
U.S.A.		<hr/>
	Canned Meats	20
	Cereals	70
	Fruit	4
	Hams	11
	Lard	14
	Pork and Beans	3
Canada	Provisions	40
		<hr/>
	Canned Meats	15
	Cereals	39
	Fruit	2
	Hams	12
Iceland	Lard	15
	Provisions	31
		<hr/>
	Fish (fresh)	14
	Fish (salted)	58
Belgium		<hr/>
	Cereals	43
	Fruit	76
	Provisions	52
	Vegetables	6
Germany	Yeast	29
		<hr/>
	Fruit	51
	Provisions	77
Russia	Cereals	58
		<hr/>
	Hams	3
South America	Cereals	4
		<hr/>
Greece	Fruit	2
Rumania	Cereals	3
China	Provisions	1
Australia	Cereals	1
Egypt	Provision	1
		<hr/>
		4,335

Imported Foodstuffs condemned or rejected and re-exported at the Port of Leith, during 1930.

	Weight in lb.	Weight in lb.
Fruit :—		
Cherries	1,860	
Black Currants	2,610	
Dried Currants	215	
Red Currants	288	
Plums	40	
Strawberries	28,822½	
Tomatoes	112	
	<hr/>	33,947½
Vegetables :—		
Carrots	197,144	
Lettuce	24,200	
Onions	23,296	
Radish	1,000	
Spinach	440	
Cauliflowers	4,320	
	<hr/>	250,400
		<hr/>
		284,347½
		<hr/>
Equal to	Tons	Cwts. Lbs.
	126	18 91½

Summary, showing total diseased and unsound Foodstuffs dealt with by the Department in the City, during 1930.

	Wt. in lbs.
At Abattoirs—Carcases	293,311
Offal (weight estimated)	124,970
In Shops, Warehouses, etc.	58,025¾
At the Port of Leith	284,347½
	<hr/>
	760,654¼
	<hr/>
Equal to	Tons Cwts. Lbs.
	339 11 62¼

To

Chairman and Members of the Public Health Committee.

DISEASES OF ANIMALS.

As the result of the Scheme of Administration approved by the Corporation, under the Local Government (Scotland) Act, 1929, responsibility for the administration of the Diseases of Animals Acts was transferred from the Magistrates to the Public Health Committee on 16th May 1930. It has been thought advisable, therefore, to give a general resumé of the work which falls to be performed under the Acts, for the information of the Committee.

In a normal year, the duties arising from the control of outbreaks of disease represent only a small proportion of the work which has to be performed as compared with duties of a supervisory and preventive character. The latter require the officers of the Department to be continually on the alert, and much of the work is of a character which cannot be shown adequately by figures or in tabular form. Further, in part, at least, the work is performed simultaneously with other duties which are carried out by the officers of the Department.

The Acts confer power on the Minister of Agriculture to make orders for the control and prevention of animal diseases, to govern the import and export of animals and carcasses, to control the conditions of transport of animals by land and sea, and for other similar purposes. Orders have been made by the Minister in respect of the following diseases :—

Cattle Plague.	Anthrax.
Bovine Pleuro-pneumonia.	Foot and Mouth Disease.
Glanders and Farcy.	Parasitic Mange of Horses.
Sheep Pox.	Sheep Scab.
Epizootic Lymphangitis.	Swine Fever.
Rabies.	Bovine Tuberculosis.

The country has been free from the first five diseases in the left column for a number of years varying in each case.

Rabies.—The last outbreak of Rabies, which occurred in 1921-23 in the south of England, was believed to be due to the illegal importation of dogs by aircraft. A suspected case of rabies in a cat was reported during the year and investigated, but the symptoms manifested, though alarming to the owner, were not those of rabies. In view of the long incubative period of rabies, which may be as long as six months, the insidious development of the disease, and the attendant danger to human beings, it is essential to investigate every case to which the smallest suspicion may attach, especially in a seaport town where the possibility of smuggling susceptible animals ashore, in order to escape the six months quarantine which is imposed, cannot altogether be ignored.

Anthrax.—One case of anthrax occurred in a bullock sent from the County of Midlothian to Gorgie Slaughterhouse for slaughter on account of sickness. Arising out of this case, the Markets Committee have decided to provide a chamber for the reception and handling of animals sent to the Abattoir for emergency slaughter. In addition to the Anthrax Order, the Edinburgh and Midlothian Order of 1910 requires investigation to be made in all cases of death in bovines, without previously observed manifestation of illness. Thirty-three deaths on farms were reported and investigated with negative results, so far as anthrax and other notifiable disease was concerned. Similarly, investigations were made in respect of 177 cattle, sheep and pigs found dead on arrival of trains at Gorgie, or which died in the various live stock markets without previous manifestation of illness.

Foot and Mouth Disease.—Eight outbreaks of foot and mouth disease occurred in Great Britain in 1930, but the City has been free from the disease since 1922. Outbreaks of foot and mouth disease are controlled under the powers contained in the Foot and Mouth Disease Order of 1928 and the following subsidiary Orders of a preventive character are in operation. Foot and Mouth (Boiling of Animal Foodstuffs) Order, which requires the boiling of meat and meat residues before being fed to susceptible animals. Foot and Mouth Disease (Packing Materials) Order, which requires the destruction of straw used for packing, packing straw of foreign origin being regarded as a potential source of infection. Proceedings were taken against two persons for breaches of this Order and a fine of 2s. 6d. was imposed in each case. The Importation of Carcasses (Prohibition) Order, which prohibits the import of fresh carcasses from the Continent of Europe was the sequel to the importation into Leith, in 1926, of a consignment of Belgian pig carcasses which were found to be affected with foot and mouth disease. Cured meats (bacon, etc.) may be imported provided they are certified to have been subjected to the curing treatment specified in the Order. Close observation is maintained at Leith Docks to see that the specified conditions have been complied with. The Movement of Animals (Records) Order requires the owners of cattle, sheep, goats and pigs to keep records of movements of these animals on to or out of their premises, together with the place of origin or destination as the case may be. The object of these records is to facilitate tracing the origin of infection and the distribution of contacts, especially in foot and mouth disease. Owners' records are checked from time to time in the course of visits to premises for other purposes.

Parasitic Mange of Horses.—Seven suspected cases were reported under the Parasitic Mange Order, but proved negative on investigation.

Sheep Scab.—The City remained free from this disease during the year and no reports were received from the other local authorities requiring the tracing of sheep which had passed through the City markets and subsequently developed sheep scab. The Regulations made by the Local Authority, under the Order, which require (a) the periodical dipping of all sheep within the City ; and (b) double dipping of all sheep,

which arrive from the north of Scotland, within fourteen days of arrival at a place of destination in the City, have continued in operation. Sheep owners are required to notify the time and place of dipping, to permit of representation at the dipping, by an officer of the Local Authority. In terms of these Regulations 43,809 sheep were dipped under supervision during the year.

The Sheep Double-Dipping Regulations were made simultaneously by all the Scottish local authorities south of the Forth and Clyde, at a time when there was a definite danger of introducing sheep scab with north country sheep. The disease position in the north of Scotland at the present time does not justify continuance of the double-dipping requirement. Since the close of the year, the county local authorities have met in conference to discuss the question of revoking these Regulations, but the City and other burghal local authorities, which are members of the group, were not invited to take part in the conference.

Swine Fever.—Thirteen reports of suspected swine fever were received during the year. The necessary preliminary action was taken by the Department and the reports were transmitted to the Ministry of Agriculture and Fisheries for further investigation, as laid down in the Swine Fever Order of 1908. Swine fever was confirmed by the Ministry in two cases which occurred in the month of December and were the beginning of a series of outbreaks which continued with the turn of the year, and which have had most unfortunate consequences for the owners concerned. Arising out of these outbreaks, the Local Authority became responsible for the removal and destruction of 115 carcasses and a large amount of offal from the infected premises.

With the object of tightening up the machinery for the control of swine fever, the Ministry of Agriculture and Fisheries issued a circular letter to all local authorities, during the year, in which the main points raised were (1) The prominent exhibition on infected premises of the rules to be observed thereon and the enforcement of these rules by the local authority ; (2) Periodical inspection by the local authority of the registers required to be kept by pig dealers, castrators and owners of boars ; (3) Disinfection of markets, lairs, and of vehicles used for the transport of swine ; (4) Veterinary inspection of animals entering markets and public sales. In a report on this circular letter, the following suggestions were submitted by the writer to the Committee and were ordered to be transmitted to the Ministry : (1) The availability of licences authorising the movement of pigs from an infected place to a slaughterhouse should be reduced to 48 hours and should be made uniform ; (2) It should be made a condition of licences that pigs moved from infected places must be slaughtered within 12, or at most 24 hours after admission to a slaughterhouse ; (3) After premises have been declared infected premises by the Ministry, licences permitting movement off the premises should be issued locally instead of from London, and only after inspection by the Veterinary Officer of the local authority, who must be satisfied as to the health of the pigs proposed to be moved.

Under the Regulation of Movement of Swine Order, 66 pigs were moved under licence from scheduled areas in England to various premises in the City, subject to detention and isolation for 27 days after arrival. Periodical visits were made to these premises with the double object of seeing that the conditions of the licence were fulfilled and to maintain observation on the health of the pigs.

The Ministry of Agriculture and Fisheries, by special Order, authorised a sale of pedigree pigs in the City in the month of April, the special Order being necessary to permit the exposure of pigs from scheduled areas in England. The condition was imposed that pigs must be moved under licence from the sale and be subject to 27 days isolation and detention after arrival at the place of destination. Forty-eight licences were issued authorising movement of the pigs to various destinations in England and Scotland.

Bovine Tuberculosis.—As stated elsewhere, 21 animals were dealt with under the Tuberculosis Order of 1925. Of these, six were removed, under notice in terms of the Order, from the Markets and were destroyed by the owners at their own risks. One was returned to district of origin where it was destroyed by the local authority concerned, and fourteen were destroyed by the Local Authority of the City. The agreed valuation of the fourteen animals was £149, and the compensation payable amounted to £59, or an average of £2, 6s. 2d. per animal. Seventy-five per cent. of the gross compensation is refunded by the Treasury. The amount payable by the Local Authority was thus £32, 7s. 4d., towards which a sum of £26, 12s. 8d. was realised from the salvage of hides, etc.

Control of Dogs Order.—This Order and the Regulations made in terms thereof require (1) the wearing by dogs of a collar bearing the name and address of the owner, and (2) the maintenance of dogs under effective control between sunset and sunrise. The object of the Order is the prevention of sheep-worrying which has unfortunately, been of too frequent occurrence in the City in recent years. Proceedings were taken against 85 persons for breach of the Order or the Regulations. Of these, 3 cases were dropped or withdrawn, 2 were acquitted, 10 persons were admonished and 70 were fined sums varying from 2s. 6d. upwards.

Importation of Animals. Irish and Canadian Cattle.—The Orders controlling the importation of Irish and Canadian cattle permit these animals to be landed at ports approved for the purposes, where, on arrival, they are inspected and thereafter they may be moved on licence, in the case of fat cattle, to a slaughterhouse, and, in the case of store cattle, to (a) a specially authorised market or (b) farms or other premises where they must be detained for six days after arrival. 23,210 Irish cattle were received at Gorgie Market under licence from ports and 1,368 licences were issued authorising movement of these cattle from the Market. 5,428 Irish cattle were moved to farms in the district of the Local Authority from the Market or direct from the ports, and were maintained under observation during the period of detention. 1,299 cattle were licensed to Gorgie Abattoir. Only 26 Canadian cattle were received under licence and all were consigned to the slaughterhouse.

Horses.—Five consignments of horses were landed at Leith Docks from Iceland and Holland. The horses were released after inspection and on submission of the necessary certificates.

The Animals (Importation) Order, 1930, was issued during the year and revoked the Foreign Animals Order of 1910. It deals with the prevention of the introduction of disease into Great Britain by means of ruminating animals and swine brought overseas from countries prohibited by the Order. It is not uncommon for ships to arrive at Leith Docks, having on board sheep, pigs or goats, as ship's stores, in contravention of this Order, but no contraventions of this kind occurred during the year.

Certification for Export.—The Dominions of Canada, Australia and New Zealand require disinfection and certification of straw and hay used for packing goods exported from this country to the Dominions. Facilities are provided for the disinfection of straw, etc., at an old Municipal Disinfecting Station, at a small charge to cover costs. During the year, 439 certificates were issued to cover goods exported in disinfected straw. Surprise visits are paid, from time to time, to the packing establishments of exporters to ensure that the conditions necessary for certification are being complied with.

In addition to the above, certificates were granted, after the necessary inspection, to cover exports of pigs to France and Northern Ireland, wool to Italy and Greece, beef fat to Sweden, and various prepared meat products to Switzerland and the United States.

Transport of Animals.—The Animals (Sea Transport) Order prescribes the accommodation and fittings which must be provided on board ship for transport of animals by sea. It deals entirely with the protection of animals against unnecessary suffering during sea transport to or from Great Britain. Inspectors of the Ministry maintain supervision of the oversea transport and especially of the export of horses to the Continent, but supervision of the coastwise traffic devolves, in a large measure, on the officers of the Local Authority. Animals were landed at Leith Docks from coastwise vessels, during the year, as follows:—Horses 346, Cattle 63, Sheep 41,124, Goats 1, Pigs 100. Supervision was maintained over the cleansing and disinfection of the vessels after landing of the animals.

The Transit of Animals Order is similarly designed to protect animals during transport by rail or road, and, in addition, prescribes disinfection of cattle trucks, motor and horse-drawn vehicles used for the transport of animals. The disinfection of road vehicles was a very necessary measure which only became operative in October 1930. The Markets Committee have provided facilities and labour for the purpose at Gorgie Markets, making a charge which was approved by the Public Health Committee. The approximate average number of road vehicles disinfected on market days each week is 100. As stated elsewhere, a dealer was prosecuted and fined £5 for consigning a cow by rail to Gorgie whilst the animal was unfit to travel.

Supervision has been maintained at the railway loading banks over the cleansing and disinfection of railway trucks, sidings and approaches, and the railway companies deserve credit for the efficient manner in which this work is done.

The Markets, Sales and Lairs Order regulates many features in the construction of live stock markets, and provides for cleansing and disinfection on each occasion after use. All the Marts at Gorgie are well constructed for efficient and relatively easy disinfection, and this is fortunate, for, with sales on two consecutive days each week, cleansing and disinfection overnight must be carried out. Regular supervision is maintained and the work is generally well done.

Protection of Animals (Scotland) Act, 1912.—During the year, 35 animals were found in the Markets suffering from disease or injury which exposed them to unnecessary suffering if put through the ordinary procedure of exposure for sale and disposal. As the result of the action taken, all of these animals were passed to the local Abattoir and there slaughtered.

Summary of Contraventions of the Diseases of Animals Acts and Orders dealt with during the year.

Orders.	Number of Cases.	Results.
Transit of Animals Order . . .	1	Fined £5.
Swine Fever Order . . .	1	Admonished.
Control of Dogs Order . . .	70	Fined £5.
“ “ “ . . .	10	Fined 2s. 6d. upwards.
“ “ “ . . .	2	Admonished.
“ “ “ . . .	3	Acquitted.
Tuberculosis Order . . .	1	Dropped or withdrawn.
Foot and Mouth Disease (Packing Materials) Order . .	2	Fined £10.
		Fined 2s. 6d.

Lighting and Cleansing Department Stud.—Five hundred and sixty-four visits of attendance were made to the stud under the control of the Lighting and Cleansing Department, and eight horses were subjected to inspection and examination prior to consideration of purchase by the Lighting and Cleansing Committee.

Colinton Mains and Oxfangs Farms.—General supervision has been maintained over the herd and farm stock, and the Staff of the Department have co-operated with the Farm Manager on matters relating to the purchase, management and feeding of the stock. Two hundred and forty-five visits were paid to the farms for the treatment of sick and parturient animals.

Staff and Police.—I desire to express my thanks to the Staff of the Department for their assistance and for the efficient manner in which they have carried out their duties during the year. I also wish to express my gratitude to the Chief Constable for his willing co-operation, and to the Officers of the Police Force, whose assistance has contributed materially to the efficient performance of the duties under the Diseases of Animals Acts.

I am,

Ladies and Gentlemen,

Your obedient Servant,

A. GOFTON, F.R.C.V.S.,
Chief Veterinary Inspector.

